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## The World Fertility Survey: Current Status and Findings


by
Sir Maurice Kendall
Project Director, World Fertility Survey



**Editor's Summary.** The World Fertility Survey (WFS) is the largest social science research project ever undertaken. Through the WFS more than 400,000 women of reproductive age in more than 40 developing countries and 20 developed countries are providing information on their marriages, fertility, and contraceptive practice. In 1979, five years after the first survey began in Fiji, data from the WFS are answering questions that policy makers and demographers have debated for the last decade.

Among the findings to emerge so far from the published reports of 15 developing countries, four conclusions stand out:

- Fertility is declining at a dramatic rate in many of these countries.
- Age at marriage is increasing in some Asian countries but changing very little in Latin America.
- About half of all married women of reproductive age want no more children, but about half of these women are not using effective methods of family planning.
- More than 80 percent of all married women in every country except Nepal have heard of contraception, but the percentage who have ever used contraception varies widely, from 10 percent in Pakistan to 82 percent in Costa Rica.


These findings and related data come from the various national surveys which together constitute the World Fertility Survey. Each survey is carried out by national government agencies utilizing similar core questionnaires and optional questionnaire modules that permit international comparisons of data. The WFS is administered by the International Statistical Institute in collaboration with the International Union for the Scientific Study of Population. Sir Maurice Kendall is Project Director. The United Nations Fund for Population Activities (UNFPA) and the United States Agency for International Development (USAID) provide financial support and are encouraging further analysis of WFS data.

### Declining Fertility

The WFS surveys illustrate declining fertility by comparing the average size of families among ever-married women aged 45 to 49 with the average size of completed families expected for all women now of reproductive age, calculated from current fertility rates. In Costa Rica, for example, women aged 45 to 49 have experienced 7.2 live births during their lives, but younger women are now expected to average only 3.8 births by the time they reach the same age. This is a decline in family size of about 40 percent. In Sri Lanka, women aged 45 to 49 had an average of 6.0 live births, but women of reproductive age now are expected to have only 3.4 births by the time they reach their late forties, an equally sharp decline. (See Figure 1, p. M-75.)

The age when women marry is also changing. Even where memories and age recollections are inaccurate, increasing age at marriage in Asia is documented by comparing the ages when the older and younger women in the survey married. In Korea, for example, women aged 25 to 29 have married three years later than women aged 40 to 44.

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Phyllis T. Piotrow, Ph.D., Director; Helen K. Kolbe, M.S., Co-Director; Ward Rinehart, Editor.

The high percentage of women aged 20 to 24 who were still single at the time of the surveys — over half in South Korea and Sri Lanka, for example — indicates that the mean age at marriage is rising. In five of the six of the Latin American countries surveyed, however, the age at which women marry has not changed, the exception being Panama, where it has increased slightly.

While a delay in marriage can and usually does produce a decline in the crude birth rate, overall the impact of increased age at marriage on fertility is less than might be expected. Women who marry late — that is, in their late teens or early twenties — have more children in the first five years of marriage than women who marry very young and may not even be fully fecund at the time of formal marriage.

A major finding with important implications for family planning program action is the large number of women who want no more children. In 10 of the 15 developing countries reporting so far, more than half of currently married, fecund women do not want more children. The figure is over 60 percent in 6 countries.

Equally important is the high percentage who have heard about some method of family planning — at least 75 percent in 14 of the 15 countries. The pill is best known everywhere and — at the time of these surveys — was the most widely used method in 8 of the 15 countries. Sterilization, mainly female, was not as widely known, but it was the major method in 4 countries and second in 2 others at the time of the surveys.

### Unmet Needs for Family Planning

WFS data show two important gaps, or areas of unmet need:

- the gap between knowledge of a method of family planning and use of family planning and
- the gap between desire for no more children and use of family planning.

About 50 percent of the women in most of these countries know about family planning but are not using it; 20 to 30 percent want no more children but are not using effective family planning methods to prevent pregnancy. The gap between the desire to control fertility and the practice of contraception would be even larger if those women who want to space or delay but not entirely terminate their childbearing were included.

One analysis of family planning use and availability based on WFS data concludes that better knowledge of family planning outlets and access to them could substantially reduce unmet need in remote areas such as Nepal and rural portions of Colombia. In Nepal, for instance, 95 percent of exposed women who want no more children and do not know an outlet for services are not using effective contraceptives compared with only 51 percent of those who know of an outlet within two hours' travel.

Other factors which influence knowledge and use of family planning are age, years since marriage, number of living children, rural or urban residence, educational level, and number of children desired. Yet desire to stop childbearing is not confined to any one socioeconomic group. WFS data show that a substantial proportion of women in rural areas, women with no education, and women whose husbands hold low paying jobs also want no more children. These women often have large families already and thus may be especially aware of the burdens of raising a large family on limited resources. Unmet need for family planning, as for other social services, is great among poor, illiterate, and rural families.

The level of unmet need for family planning can be measured in various ways. The most conservative approach, used in this discussion, measures the percentage of all currently married women who (1) are exposed to risk of pregnancy, (2) want no more children, and (3) are not currently using a modern family planning method. Since increases in use of family planning and decreases in the desire for more children go hand in hand, the level of unmet need does not decline immediately as the use of family planning grows. Instead, need continues to grow, reflecting the increasing desire for smaller families. While the greatest need may be in countries like Bangladesh* and Peru, where about 60 percent of the women want no more children but only 6 percent and 15 percent, respectively, are using modern methods, the need is also high in countries like South Korea, where 35 percent are using a modern method but 74 percent want no more children. (See Table 18, p. M-91.)

The implications are important for policy makers and administrators. Data from these WFS surveys show that fertility is declining under very different conditions in different parts of the world. The aspirations and actions of millions of couples are changing at a pace that would once have been thought impossible. By documenting these changes in terms that are internationally comparable, the World Fertility Survey is providing a factual demographic base for policy makers and government officials to establish effective programs.

The following overview by Sir Maurice Kendall, Project Director for the World Fertility Survey, indicates the extent of WFS activities and some of the major findings to date. Appendices provide information on the location of depository libraries, the availability of data tapes, and publications of and about the World Fertility Survey.

**End of Editor's Summary**

*In Bangladesh, some women were asked "Do you want to have another child soon?" instead of "Do you want to have another child sometime?" Therefore the Bangladesh figure is not strictly comparable with the figures on the percentage of women wanting no more children for the other 14 countries.

## BACKGROUND

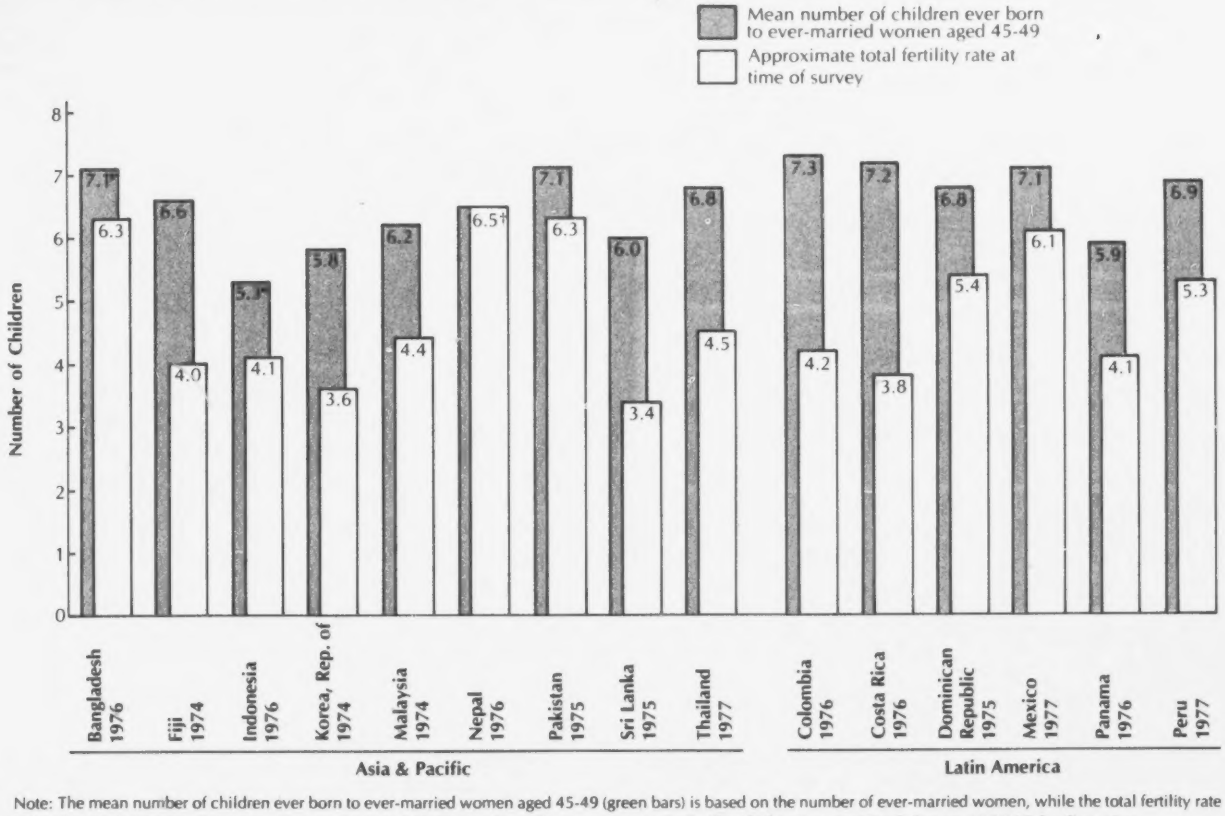
The World Fertility Survey is an international research program designed to assist countries, particularly in the developing world, to carry out scientifically designed sample surveys of human fertility behavior. Officially announced in 1972, the World Fertility Survey is being undertaken by the International Statistical Institute (ISI) with the collaboration of the United Nations and in cooperation with the International Union for the Scientific Study of Population (IUSSP). The WFS is financed by grants to the ISI from the United Nations Fund for Population Activities (UNFPA) and the US Agency for International Development (USAID). Contributions from other countries, notably the United Kingdom and Canada, supplement the funds provided by the two principal donors.

The primary aim of the WFS program is to provide each participating country with accurate demographic data to describe and interpret the fertility of its population. The availability of this information should facilitate national efforts in social, economic, health, and population planning. Two ancillary objectives of the WFS are: (1) to increase the capability for undertaking fertility and other demographic survey research in developing countries, and (2) to provide researchers in participating countries and the world at large the opportunity to make international comparisons of data on fertility levels and differentials, family size ideals, and knowledge and practices of fertility regulation.

**Sir Maurice Kendall**
**Project Director, World Fertility Survey**

The WFS studies undertaken in participant countries are generally single round surveys of households so selected as to provide a national probability sample. Eligible women are identified by means of a household screening interview and

**Figure 1. Past and Current Fertility Levels in 15 Developing Countries with Published World Fertility Survey Reports**




Note: The mean number of children ever born to ever-married women aged 45-49 (green bars) is based on the number of ever-married women, while the total fertility rate (white bars) is based on all women. Thus, to the extent that fewer than all women marry, the fertility decline is exaggerated. See pp. M-84-85 for discussion.

*Figure for women aged 45-49 lower than for women aged 40-44; latter shown.
†Figure for mean number of children corrected after publication of country report. Marital fertility rate shown; total fertility rate not available.

later are interviewed according to a thorough interview schedule known as the individual, or core, questionnaire. Eligible women are generally defined as being ever-married and under the age of 50. The marital criterion has been dropped in many surveys, however, particularly those carried out in the Latin American and Caribbean region, and replaced by a simple age criterion.

The number of women interviewed (or sample size) varies from country to country, generally ranging from 3,000 to 10,000. Sample size depends on such considerations as the size of the country's population and its heterogeneity, the organizational capacities and analytical interests of the country, and the availability of national and international financing.

**Table 1. Countries Participating in the World Fertility Survey as of April 1979, by Progress Status**

| 1st Report Complete | 1st Report in Progress | Survey in Progress | Possible Participants |
|---|---|---|---|
| **AFRICA** | | | |
| | | Cameroun | Benin[1] |
| | | Ghana | Mauritania[1] |
| | | Ivory Coast | Nigeria |
| | | Kenya | Tanzania |
| | | Lesotho | Zambia |
| | | Morocco | |
| | | Senegal | |
| | | Sudan | |
| | | Tunisia | |
| **ASIA** | | | |
| Bangladesh | | Burma[2] | Afghanistan |
| Fiji | | India[3] | |
| Indonesia | | Iran | |
| Korea, Rep. of | | Philippines | |
| Malaysia | | | |
| Nepal | | | |
| Pakistan | | | |
| Sri Lanka | | | |
| Thailand | | | |
| **LATIN AMERICA & CARIBBEAN** | | | |
| Colombia | Guyana | Chile[4] | Brazil[5] |
| Costa Rica | Jamaica | Ecuador | Cuba |
| Dominican Republic | Trinidad & Tobago | Haiti | El Salvador |
| Mexico | Venezuela | Paraguay | Guatemala[1] |
| Panama | | | |
| Peru | | | |
| **MIDDLE EAST** | | | |
| | Jordan | Egypt | |
| | | Syria | |
| | | Turkey | |
| | | Yemen A.R. | |
| **DEVELOPED COUNTRIES** | | | |
| Hungary | Belgium | Finland | Australia |
| Japan | Bulgaria | France | Canada |
| Netherlands | Czechoslovakia | Italy | New Zealand |
| Spain | Denmark | Norway | Sweden[1] |
| | Israel | Poland | |
| | UK | Portugal | |
| | USA | Rumania | |
| | Yugoslavia | Switzerland | |

[1] Project to be submitted

[2] Field work in Burma has been postponed.

[3] Seven states in India are taking part using WFS methodology and software.

[4] Field work in Chile has been indefinitely postponed.

[5] Country survey using WFS methodology and software

## COUNTRY PARTICIPATION

As of the end of April 1979, 41 developing countries were participating in the WFS program. A further three were scheduled to join before the end of 1979. Yet another seven had shown some interest in conducting surveys under the WFS aegis at some time in the future (see Table 1 and Table 2, p. M-94).

The earliest surveys undertaken in connection with the WFS were in Asia and the Pacific. Attention later focused on Latin America and the Caribbean, followed by Africa and the Middle East. The 41 participating countries are distributed geographically as follows:

| | |
|---|---|
| Asia and the Pacific | 13 |
| Latin America and the Caribbean | 14 |
| Africa | 9 |
| Middle East | 5 |

As may be seen in Table 1, published reports on survey findings are currently available for 15 developing countries, including 9 from Asia and the Pacific and 6 from Latin America. Reports from another 5 countries are in various stages of preparation, 4 from Latin America and the Caribbean, and one from the Middle East. There are 21 surveys still in the field work or initial data processing stages, including those of all 9 African participants. Although accurate predictions of the progress of work are difficult, it is hoped that between 23 and 27 country reports will be published by the end of 1979 (see Table 2, p. M-94).

The WFS program is principally oriented to developing countries, but developed countries also participate, although without external financial support. The major responsibility for coordination of developed country surveys has been assumed by the United Nations Economic Commission for Europe (UN-ECE), in close collaboration with the WFS. At present there are 20 developed countries at varying stages of work on fertility surveys (see Table 1 and Table 3, p. M-98). Field work has already been completed in 17 countries, and four initial country reports have been published (9, 12, 21, 38).

## SURVEY CONTENTS

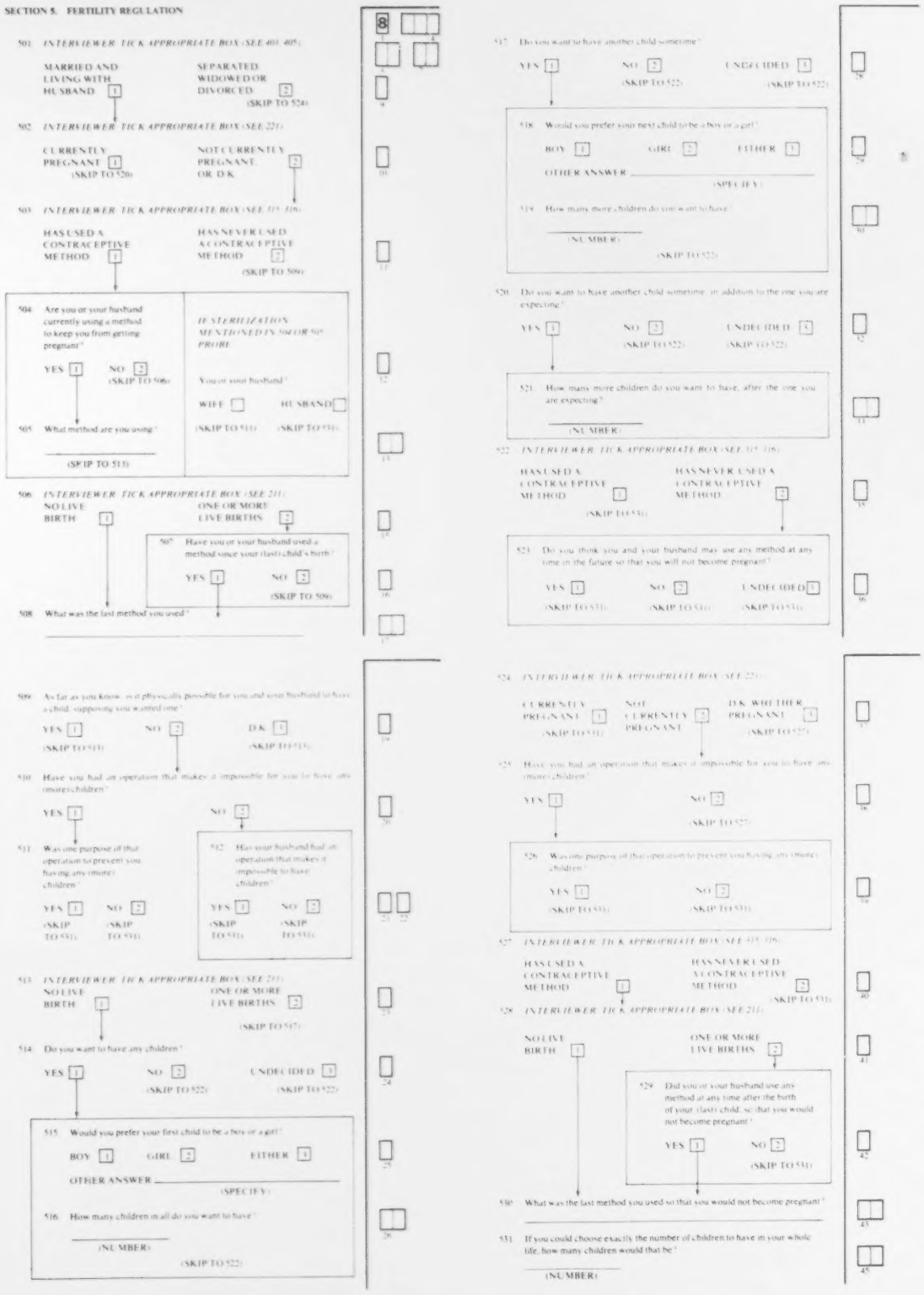
The WFS has developed a large set of materials to aid and guide countries in carrying out their surveys. These include the household schedule for the screening interview, the individual questionnaire (see p. M-77), various modules which can be incorporated into the individual or household questionnaires, and manuals for national project directors and their staffs.

### The Household Schedule

The household schedule is a flexible instrument which can perform various functions, depending on the survey design. In the majority of countries, the design calls for interviewing all eligible women encountered in sample households. In these countries, the household schedule may serve three purposes.

## Core Questionnaire

The text of Section 5 on Fertility Regulation, reproduced below from the individual questionnaire, shows how data on fertility regulation and fertility preferences are gathered. For additional information the Family Planning Module can be substituted for this section of the core questionnaire.



SECTION 5. FERTILITY REGULATION

501 *INTERVIEWER: TICK APPROPRIATE BOX (SEE 401–405)*

MARRIED AND LIVING WITH HUSBAND [1] — SEPARATED, WIDOWED OR DIVORCED [2] (SKIP TO 524)

502 *INTERVIEWER: TICK APPROPRIATE BOX (SEE 221)*

CURRENTLY PREGNANT [1] (SKIP TO 520) — NOT CURRENTLY PREGNANT OR D/K [2]

503 *INTERVIEWER: TICK APPROPRIATE BOX (SEE 315–316)*

HAS USED A CONTRACEPTIVE METHOD [1] — HAS NEVER USED A CONTRACEPTIVE METHOD [2] (SKIP TO 509)

504 Are you or your husband currently using a method to keep you from getting pregnant?

YES [1] — NO [2] (SKIP TO 506)

505 What method are you using?

(SKIP TO 513)

*IF STERILIZATION MENTIONED IN 504 OR 505 PROBE*

You or your husband?

WIFE [ ] HUSBAND [ ]

(SKIP TO 511) (SKIP TO 511)

506 *INTERVIEWER: TICK APPROPRIATE BOX (SEE 211)*

NO LIVE BIRTH [1] — ONE OR MORE LIVE BIRTHS [2]

507 Have you or your husband used a method since your (last) child's birth?

YES [1] — NO [2] (SKIP TO 509)

508 What was the last method you used?

509 As far as you know, is it physically possible for you and your husband to have a child, supposing you wanted one?

YES [1] (SKIP TO 513) — NO [2] — D/K [3] (SKIP TO 513)

510 Have you had an operation that makes it impossible for you to have any more children?

YES [1] — NO [2]

511 Was one purpose of that operation to prevent you having any (more) children?

YES [1] (SKIP TO 513) — NO [2] (SKIP TO 513)

512 Has your husband had an operation that makes it impossible to have children?

YES [1] (SKIP TO 513) — NO [2] (SKIP TO 513)

513 *INTERVIEWER: TICK APPROPRIATE BOX (SEE 211)*

NO LIVE BIRTH [1] — ONE OR MORE LIVE BIRTHS [2] (SKIP TO 517)

514 Do you want to have any children?

YES [1] — NO [2] (SKIP TO 522) — UNDECIDED [3] (SKIP TO 522)

515 Would you prefer your first child to be a boy or a girl?

BOY [1] — GIRL [2] — EITHER [3]

OTHER ANSWER _____ (SPECIFY)

516 How many children in all do you want to have?

_____ (NUMBER)

(SKIP TO 522)

517 Do you want to have another child sometime?

YES [1] — NO [2] (SKIP TO 522) — UNDECIDED [3] (SKIP TO 522)

518 Would you prefer your next child to be a boy or a girl?

BOY [1] — GIRL [2] — EITHER [3]

OTHER ANSWER _____ (SPECIFY)

519 How many more children do you want to have?

_____ (NUMBER)

(SKIP TO 522)

520 Do you want to have another child sometime, in addition to the one you are expecting?

YES [1] — NO [2] (SKIP TO 522) — UNDECIDED [3] (SKIP TO 522)

521 How many more children do you want to have, after the one you are expecting?

_____ (NUMBER)

522 *INTERVIEWER: TICK APPROPRIATE BOX (SEE 315–316)*

HAS USED A CONTRACEPTIVE METHOD [1] (SKIP TO 531) — HAS NEVER USED A CONTRACEPTIVE METHOD [2]

523 Do you think you and your husband may use any method at any time in the future so that you will not become pregnant?

YES [1] (SKIP TO 531) — NO [2] (SKIP TO 531) — UNDECIDED [3] (SKIP TO 531)

524 *INTERVIEWER: TICK APPROPRIATE BOX (SEE 221)*

CURRENTLY PREGNANT [1] (SKIP TO 531) — NOT CURRENTLY PREGNANT [2] — D/K WHETHER PREGNANT [3] (SKIP TO 527)

525 Have you had an operation that makes it impossible for you to have any (more) children?

YES [1] — NO [2] (SKIP TO 527)

526 Was one purpose of that operation to prevent you having any (more) children?

YES [1] (SKIP TO 531) — NO [2] (SKIP TO 531)

527 *INTERVIEWER: TICK APPROPRIATE BOX (SEE 315–316)*

HAS USED A CONTRACEPTIVE METHOD [1] — HAS NEVER USED A CONTRACEPTIVE METHOD [2] (SKIP TO 531)

528 *INTERVIEWER: TICK APPROPRIATE BOX (SEE 211)*

NO LIVE BIRTH [1] — ONE OR MORE LIVE BIRTHS [2]

529 Did you or your husband use any method at any time after the birth of your (last) child, so that you would not become pregnant?

YES [1] — NO [2] (SKIP TO 531)

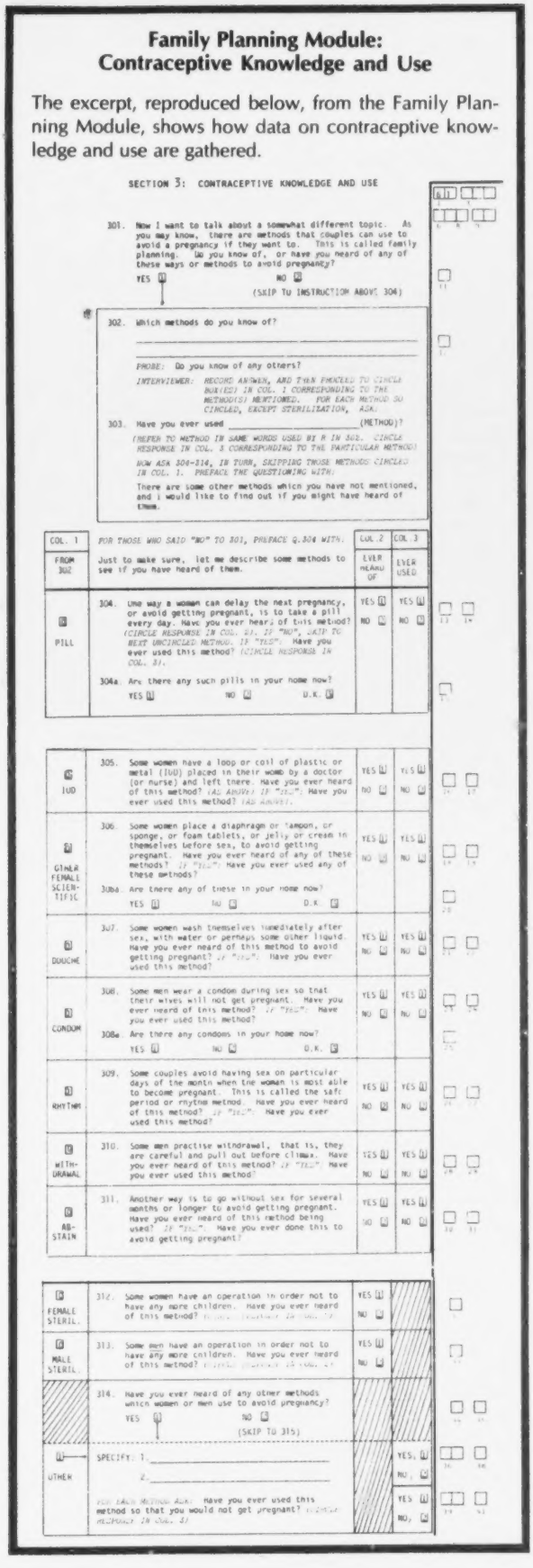
530 What was the last method you used so that you would not become pregnant?

531 If you could choose exactly the number of children to have in your whole life, how many children would that be?

_____ (NUMBER)

## Family Planning Module: Contraceptive Knowledge and Use

The excerpt, reproduced below, from the Family Planning Module, shows how data on contraceptive knowledge and use are gathered.



SECTION 3: CONTRACEPTIVE KNOWLEDGE AND USE

301. Now I want to talk about a somewhat different topic. As you may know, there are methods that couples can use to avoid a pregnancy if they want to. This is called family planning. Do you know of, or have you heard of any of these ways or methods to avoid pregnancy?
YES [1] NO [2] (SKIP TO INSTRUCTION ABOVE 304)

302. Which methods do you know of?
PROBE: Do you know of any others?
INTERVIEWER: RECORD ANSWER, AND THEN PROCEED TO CIRCLE BOX(ES) IN COL. 1 CORRESPONDING TO THE METHOD(S) MENTIONED. FOR EACH METHOD SO CIRCLED, EXCEPT STERILIZATION, ASK:

303. Have you ever used _____ (METHOD)?
(REFER TO METHOD IN SAME WORDS USED BY R IN 302. CIRCLE RESPONSE IN COL. 3 CORRESPONDING TO THE PARTICULAR METHOD)
NOW ASK 304-314, IN TURN, SKIPPING THOSE METHODS CIRCLED IN COL. 1. PREFACE THE QUESTIONING WITH:
There are some other methods which you have not mentioned, and I would like to find out if you might have heard of them.

| COL. 1 FROM 302 | FOR THOSE WHO SAID "NO" TO 301, PREFACE Q.304 WITH: Just to make sure, let me describe some methods to see if you have heard of them. | COL. 2 EVER HEARD OF | COL. 3 EVER USED |
|---|---|---|---|
| PILL | 304. One way a woman can delay the next pregnancy, or avoid getting pregnant, is to take a pill every day. Have you ever heard of this method? (CIRCLE RESPONSE IN COL. 2). IF "NO", SKIP TO NEXT UNCIRCLED METHOD. IF "YES": Have you ever used this method? (CIRCLE RESPONSE IN COL. 3). | YES [1] NO [2] | YES [1] NO [2] |
| | 304a. Are there any such pills in your home now? YES [1] NO [2] D.K. [3] | | |
| IUD | 305. Some women have a loop or coil of plastic or metal (IUD) placed in their womb by a doctor (or nurse) and left there. Have you ever heard of this method? (AS ABOVE) IF "YES": Have you ever used this method? (AS ABOVE). | YES [1] NO [2] | YES [1] NO [2] |
| OTHER FEMALE SCIENTIFIC | 306. Some women place a diaphragm or tampon, or sponge, or foam tablets, or jelly or cream in themselves before sex, to avoid getting pregnant. Have you ever heard of any of these methods? IF "YES": Have you ever used any of these methods? | YES [1] NO [2] | YES [1] NO [2] |
| | 306a. Are there any of these in your home now? YES [1] NO [2] D.K. [3] | | |
| DOUCHE | 307. Some women wash themselves immediately after sex, with water or perhaps some other liquid. Have you ever heard of this method to avoid getting pregnant? IF "YES": Have you ever used this method? | YES [1] NO [2] | YES [1] NO [2] |
| CONDOM | 308. Some men wear a condom during sex so that their wives will not get pregnant. Have you ever heard of this method? IF "YES": Have you ever used this method? | YES [1] NO [2] | YES [1] NO [2] |
| | 308a. Are there any condoms in your home now? YES [1] NO [2] D.K. [3] | | |
| RHYTHM | 309. Some couples avoid having sex on particular days of the month when the woman is most able to become pregnant. This is called the safe period or rhythm method. Have you ever heard of this method? IF "YES": Have you ever used this method? | YES [1] NO [2] | YES [1] NO [2] |
| WITHDRAWAL | 310. Some men practise withdrawal, that is, they are careful and pull out before climax. Have you ever heard of this method? IF "YES": Have you ever used this method? | YES [1] NO [2] | YES [1] NO [2] |
| ABSTAIN | 311. Another way is to go without sex for several months or longer to avoid getting pregnant. Have you ever heard of this method being used? IF "YES": Have you ever done this to avoid getting pregnant? | YES [1] NO [2] | YES [1] NO [2] |
| FEMALE STERIL. | 312. Some women have an operation in order not to have any more children. Have you ever heard of this method? (CIRCLE RESPONSE IN COL. 2) | YES [1] NO [2] | |
| MALE STERIL. | 313. Some men have an operation in order not to have any more children. Have you ever heard of this method? (CIRCLE RESPONSE IN COL. 2) | YES [1] NO [2] | |
| | 314. Have you ever heard of any other methods which women or men use to avoid pregnancy? YES [1] NO [2] (SKIP TO 315) | | |
| OTHER | SPECIFY: 1. _____ 2. _____ FOR EACH METHOD ASK: Have you ever used this method so that you would not get pregnant? (CIRCLE RESPONSE IN COL. 3) | YES, [1] NO [2] | YES [1] NO [2] |

First, it provides the listing of household members that is essential to identifying eligible respondents for the individual questionnaire. Second, by gathering data on such matters as age, sex, and marital status of household members, it provides the denominators necessary for calculating certain demographic statistics as well as the opportunity to analyze nuptiality. Third, it provides the possibility of collecting useful contextual data on factors that may relate to fertility, such as ownership of modern objects, membership in cultural or ethnic groups, and housing conditions.

In countries lacking good systems of vital registration, the household schedule may also serve to gather data on fertility. This is accomplished by appending questions on fertility to the household schedule and administering it to a sample three or four times the size necessary to obtain the desired number of eligible women for the individual questionnaire. The goal in such cases is to obtain more precise estimates of fertility, particularly current fertility, than could be provided by the smaller sample for the individual questionnaire. The household schedule becomes, in effect, a mini-census, ideal for applying various types of fertility analysis.

### The Individual Questionnaire

The recommended individual, or core, questionnaire of the WFS consists of seven sections of questions (in 21 pages) as follows:

**Section 1. Respondent's Background**
**Section 2. Maternity History**
**Section 3. Contraceptive Knowledge and Use**
**Section 4. Marriage History**
**Section 5. Fertility Regulation**
**Section 6. Work History**
**Section 7. Current (or Last) Husband's Background**

The questions in the core questionnaire are designed to provide the following basic social, economic, demographic, and fertility data:

**Section 1. Respondent's Background.** Residence and migration status, size of community in which respondent spent her formative years, age, education, and ability to read. Optional questions cover religion, language, and ethnic group.

**Section 2. Maternity History.** Number of live births by sex and date of occurrence, incidence of pregnancy wastage, infant and child mortality, prevalence and duration of lactation for last and penultimate live births, whether currently pregnant and, if so, expected birth date and sex preference.

**Section 3. Contraceptive Knowledge and Use.** Knowledge and use of contraceptive methods, including perceived availability of key methods of contraception.

**Section 4. Marriage History.** Complete marital history, dates of initiation and termination of unions (used as proxy for length of exposure to risk of pregnancy), adapted as necessary for nonlegal and informal unions.

**Section 5. Fertility Regulation.** Capacity and desire for more children, the number desired and preference concerning the sex of the next child. For ever-users of contraception, information on current use or use since last pregnancy; for never-users, information on intention to use in the future. (For excerpts, see p. M-77.)

**Section 6. Work History.** Detailed occupational information on respondent's work, both before and after marriage.

**Section 7. Current (or Last) Husband's Background.** His education, ability to read, type of community in which formative years were spent, occupation, and age.

The individual questionnaire is regarded as a core. Virtually all countries want to add to it in one way or another, and some wish to alter one or more sections to suit their needs.

### Fertility-Related Modules

As an aid to countries wishing to investigate certain topics in greater depth than that afforded by the core questionnaire, various modules or sets of questions have been developed by the WFS staff and consultants. Each module consists of a series of questions on a particular topic and can be added, either in part or in total, to the core questionnaire. The modules deal with two kinds of variables: those which affect fertility directly and those which may affect fertility indirectly.

The modules dealing principally with variables which affect fertility directly are:

**Fertility Regulation Module.** This is an expansion of Section 5 of the core questionnaire with questions on contraceptive use in the last closed and open birth intervals,* including a question on whether the last birth was wanted.

**Family Planning Module.** This module is usually used in conjunction with the Fertility Regulation Module. Questions deal with visits to places where family planning advice and supplies may be obtained, satisfaction with service, when contraception was started and which method, approval/disapproval of contraception by never-users, and reasons for discontinuation of last contraceptive method.

**Abortion Module.** Questions are added to Section 2 of the core questionnaire to probe for infertile pregnancies in each live birth interval to determine whether any spontaneous abortion occurred. Questions are added to Section 3 to measure the respondent's attitudes toward induced abortion. The module is not recommended for use in countries where anti-abortion laws are rigorously enforced or where the topic of abortion is politically sensitive.

**Factors Other than Contraception Affecting Fertility.** This module measures the effect of "intermediate" variables, which lie causally between fertility and the cultural, social, and economic milieu. Questions treat lactation, postpartum amenorrhea, abstinence, and temporary separation of partners (three months or more) in the penultimate and last pregnancy intervals, coital frequency in the last seven days, and age at menarche and menopause.

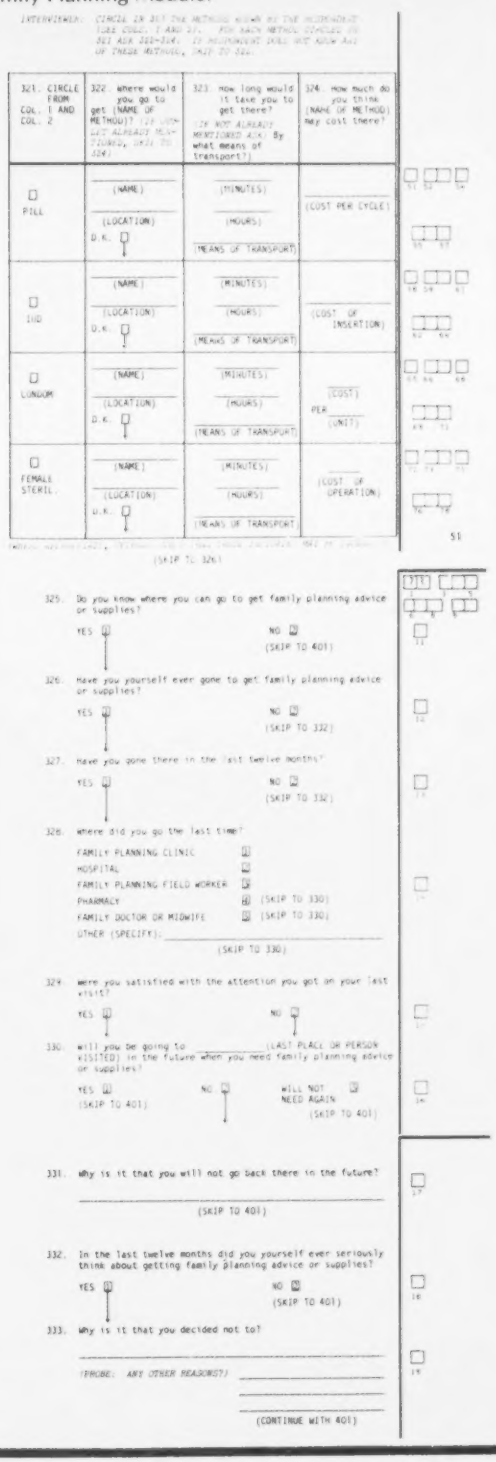
Modules which deal principally with variables which may affect fertility indirectly are:

**Community-level Variables.** This module deals with variables which characterize a community and affect most of the persons living in it, such as presence or absence of a hospital, transportation and communication facilities, health facilities, family planning facilities, education, and agricultural and/or industrial development levels. The collection of community-level data is a supplementary investigation which requires conducting interviews with community leaders, consulting reference works, and/or simply observing the community itself. The module contents are always adapted to the needs of the country.

*A closed birth interval is the time between a birth and the next birth. An open interval is the time between the last birth and the date of the interview.

## Family Planning Module: Availability

The excerpt, reproduced below, from the Family Planning Module, shows how data on family planning services and availability are gathered. Questions 321 to 324, on location of service outlets, distance, and perceived costs of various methods, have recently been added to the core questionnaire as well as being continued in the Family Planning Module.



INTERVIEWER: CIRCLE IN 321 THE METHOD WHICH HAS THE HIGHEST USE CODE: 1 AND 2. FOR EACH METHOD CIRCLED IN 321 ASK 322-324. IF NO METHOD IS CIRCLED OR IF RESPONDENT DOES NOT KNOW ANY OF THESE METHODS, SKIP TO 325.

| 321. CIRCLE FROM COL. 1 AND COL. 2 | 322. Where would you go to get (NAME OF METHOD)? (IF WOMAN GIVES ALREADY MENTIONED PLACE, SKIP TO 324.) | 323. How long would it take you to get there? (IF NOT ALREADY MENTIONED ASK: By what means of transport?) | 324. How much do you think (NAME OF METHOD) may cost there? |
|---|---|---|---|
| ☐ PILL | (NAME) (LOCATION) D.K. ☐ | (MINUTES) (HOURS) (MEANS OF TRANSPORT) | (COST PER CYCLE) |
| ☐ IUD | (NAME) (LOCATION) D.K. ☐ | (MINUTES) (HOURS) (MEANS OF TRANSPORT) | (COST OF INSERTION) |
| ☐ CONDOM | (NAME) (LOCATION) D.K. ☐ | (MINUTES) (HOURS) (MEANS OF TRANSPORT) | (COST) PER (UNIT) |
| ☐ FEMALE STERIL. | (NAME) (LOCATION) D.K. ☐ | (MINUTES) (HOURS) (MEANS OF TRANSPORT) | (COST OF OPERATION) |

(SKIP TO 326)

325. Do you know where you can go to get family planning advice or supplies?
YES ☐ NO ☐ (SKIP TO 401)

326. Have you yourself ever gone to get family planning advice or supplies?
YES ☐ NO ☐ (SKIP TO 332)

327. Have you gone there in the last twelve months?
YES ☐ NO ☐ (SKIP TO 332)

328. Where did you go the last time?
FAMILY PLANNING CLINIC ☐
HOSPITAL ☐
FAMILY PLANNING FIELD WORKER ☐
PHARMACY ☐ (SKIP TO 330)
FAMILY DOCTOR OR MIDWIFE ☐ (SKIP TO 330)
OTHER (SPECIFY): _____
(SKIP TO 330)

329. Were you satisfied with the attention you got on your last visit?
YES ☐ NO ☐

330. Will you be going to _____ (LAST PLACE OR PERSON VISITED) in the future when you need family planning advice or supplies?
YES ☐ (SKIP TO 401) NO ☐ WILL NOT NEED AGAIN ☐ (SKIP TO 401)

331. Why is it that you will not go back there in the future?
_____
(SKIP TO 401)

332. In the last twelve months did you yourself ever seriously think about getting family planning advice or supplies?
YES ☐ NO ☐ (SKIP TO 401)

333. Why is it that you decided not to?
_____
(PROBE: ANY OTHER REASONS?) _____
_____
_____
(CONTINUE WITH 401)

**General Mortality Module.** Many countries with deficient systems for the recording of vital events may be interested in measuring mortality in addition to fertility. This module is added to the household schedule to obtain information on deaths of household members in the 24 months preceding the interview, survival of first spouse, survival of parents, whether the person being interviewed is an eldest living offspring, and survival of offspring of ever-married women.

**Economic Variables.** Three modules have been developed which deal in turn with family income, asset holdings, and economic costs and benefits of children. These modules are always adapted to the needs of the country.

### The Use of Questionnaire Modules

Most countries so far enrolled in the program have chosen to adopt two or more WFS questionnaire modules (see Table 2). Virtually all countries have opted for one of the three fertility control modules: Family Planning, Fertility Regulation, or Factors Other than Contraception Affecting Fertility. In Asia and Latin America wide use has been made of the Fertility Regulation and/or Family Planning modules. All nine African countries have used the module on Factors Other than Contraception Affecting Fertility, except Morocco, which has used the Fertility Regulation and Family Planning modules. Parts of the Abortion Module have been used in almost half of the participating countries. Much less use has been made of the modules dealing with variables indirectly affecting fertility, although the 15 countries which have collected community-level data are well distributed geographically. (See Table 4.)

## TECHNICAL ASSISTANCE

The principal function of the WFS headquarters professional staff, based in London and now numbering more than 40, is to assist developing countries to carry out and analyze their fertility surveys. Assistance is provided at all stages, including questionnaire and sample designs, interviewer training, field work, coding and editing, data processing, and report writing.

Initially, various manuals were developed by WFS staff not only to insure the collection of high quality data, but also to aid personnel in the participating countries to establish a survey organization, set standards for the training of survey personnel, carry out the field work, and process and analyze the data as efficiently as possible. Some of the manuals, such as the *Survey Organization Manual, Manual on Sample Design,* and *Training Manual* are used for information and reference. Other manuals, such as the *Interviewers' Instructions, Supervisors' Instructions,* and *Guidelines for Data Processing,* are adapted to fit local survey conditions and reprinted to be used in training and data processing (40-51).

**Figure 2. A survey interview in progress in Bhairawa, Nepal.**
(Photo courtesy of V.C. Chidambaram)

The amount and nature of technical assistance required by individual countries varies a great deal, as might be expected. In general, the heaviest inputs of assistance are required at the data processing and report-writing stages. In this connection, the WFS has developed several innovations that have permitted participating countries to produce their published reports of findings less than 18 months after the completion of field work. This exceptionally rapid publication of survey results permits analysts and government officials to deal with data that are still current and relevant to policy and program needs. These innovations, described below, relate primarily to data processing.

### Data Processing

Two stages of data processing must be completed before the first country report can be written. The first is data editing, or cleaning; the second is the production of statistical tables. For years the least-developed phase of the processing of social surveys has been that of data editing. Fortunately, at about the time the WFS recognized a need for the development of a general-purpose editing package for computer use, CELADE (the UN regional Demographic Center for Latin America) was engaged in developing just such a package — named CONCOR. The WFS has worked closely with CELADE in adapting and improving the various components of CONCOR. As a result of the use of CONCOR, the interval between the end of field work and the start of tabulations has been reduced from a range of 10 to 16 months in the case of early WFS surveys to an average now of 4 to 6 months. Since CONCOR is a general-

**Table 4. Number of Countries Which Have Used Questionnaire Modules by Geographic Region and Module**

| Region | Core Questionnaire | Family Planning | Fertility Regulation | Abortion | Factors Other* | Community | Economic | General Mortality |
|---|---|---|---|---|---|---|---|---|
| Africa | 9 | 4 | 1 | 3 | 8 | 5 | 0 | 3 |
| Asia & Pacific | 13 | 7 | 10 | 8 | 3 | 4 | 2 | 1 |
| Latin America | 14 | 7 | 9 | 5 | 3 | 2 | 1 | 3 |
| Middle East | 5 | 2 | 4 | 4 | 3 | 4 | 1 | 3 |
| TOTAL | 41 | 20 | 24 | 20 | 17 | 15 | 4 | 10 |

*Factors Other than Contraception Affecting Fertility

ized system, once installed in a country it can be used for cleaning other surveys and censuses.

For the production of tables to be included in country reports, the WFS recommends using COCENTS, a tabulation package developed by the US Bureau of the Census. Unique advantages of COCENTS are its adaptability to many different computers and the fact that its output may be photographed directly for publication. A major disadvantage in comparison with more sophisticated packages is the amount of programming required for even the simplest tables. As an answer to this problem the WFS developed a program called COCGEN (for COCents GENerator), which permits the preparation of tables in a much simplified form and prepares the parameters for later use by the COCENTS program. As a result, the time required for programming and running tabulations has been cut, in the case of some countries, to as little as three months.

As a further contribution to the state of the art and as an aid to analysts in interpreting survey results, or, more precisely, to help them avoid attributing significance to insignificant results, the WFS has developed a program for the calculation of sampling errors and associated statistics. Named CLUSTERS (for Computation and Listing of Useful STatistics on ERrors of Sampling), the program has powerful recoding routines, is easy to set up, and can be run on relatively small computers. Country reports, as standard practice, now contain an appendix presenting detailed sampling error calculations.

### First Country Reports

Barring some exceptional cases, first country reports on survey findings are prepared in-country by the national survey staff. Technical assistance is provided by staff from London headquarters or by special consultants as needed. To guide countries in preparing their reports, the WFS has prepared a document entitled *Guidelines for Country Report No. 1* (47). Specifications are set out for some 200 tables, along with guidelines and cautions concerning how these tables are to be interpreted. A companion document, *Guidelines for Data Processing*, currently in draft form, describes how variables used in the analysis are to be defined and formulated (51).

By introducing an element of standardization into the production of first country reports, the WFS has helped countries to publish reports, consisting of 400 to 500 pages of tables and 100 to 150 pages of text, within a 12- to 18-month period after the end of field work. As noted earlier, 15 reports have thus far been published and another 5 are in progress. Although of limited analytical content, these reports contain a wealth of data useful to demographers, social scientists, and program and policy planners throughout the world.

### Further Analysis of the Data

To insure adequate use and application of the survey data, the WFS encourages countries to prepare projects for further analysis of their data. Both USAID and UNFPA have declared their willingness to finance such projects. (See box at right). The principal problem faced by the WFS is the provision of technical assistance in the formulation and execution of sophisticated analysis projects. Headquarters manpower is already fully occupied in providing assistance to countries in carrying out surveys and preparing the first reports. As a partial solution to this problem it was decided that the WFS should publish a series of illustrative analyses on important topics. These are supplemented by a series of Technical Bulletins containing expositions of specific substantive and methodological issues arising in data analysis.

A set of 12 topics has been identified for illustrative analyses. The analyses are being carried out by both WFS staff and invited experts. The studies will use country data now available and will be published in monograph form. They are intended to serve as models of the basic research possible with WFS data. The topics selected for illustrative analysis, along with the country data analyzed and the investigators involved, are as follows:

1. **Fertility levels and trends estimated from birth history data (Thailand)**
   **Investigator: WFS Central Staff**
2. **Indirect methods of estimating current fertility levels (Colombia)**
   **Investigator: John Hobcraft, University of Southampton**
3. **Life table analysis of birth intervals (Colombia)**
   **Investigator: WFS Central Staff**

### DATA AND FINANCIAL SUPPORT FOR FURTHER ANALYSIS

The World Fertility Survey and its sponsors encourage responsible research institutions in both the developing and developed nations to undertake analytical projects utilizing one or more country data tapes. In particular, there is an urgent need for more analysis of issues relevant to public policy, such as the determinants of differential fertility and contraceptive behavior and the consequences of recent fertility trends for development.

WFS country tapes are being converted to standard recode variable tapes, on which the location of variables is standard. These tapes will greatly facilitate intercountry comparisons. The availability of edited country tapes and standard recode tapes is shown in the table on p. M-94.

The data essentially belong to the countries and therefore can be released to outside organizations or individuals only with the permission of and subject to the conditions specified by the country concerned. Copies of tapes can be obtained by submitting a written request plus a detailed statement of the proposed research to WFS headquarters in London (World Fertility Survey, International Statistical Institute, 35-37 Grosvenor Gardens, London SW1W OBS, United Kingdom). WFS will refer all proposals to the countries concerned for their clearance, but in doing so it will not necessarily pass any judgment on the proposals unless requested to do so by the countries. If any country so desires, the results of the analysis would have to be sent to it prior to publication.

With respect to financial assistance, the US Agency for International Development (USAID) has provided WFS with funds to aid outside institutions. Requests for financial assistance should be sent to WFS, where they will be evaluated and, if sound, forwarded to USAID in Washington for final approval.

The UN Fund for Population Activities (UNFPA) will consider funding analysis projects originating in developing countries. Such proposals should be submitted to the appropriate UNFPA coordinator, who will forward them to UNFPA headquarters in New York.

4. **Age at marriage and fertility (Thailand)**
   **Investigator: WFS Central Staff**
5. **The role of contraceptive sterilization in family limitation (Panama)**
   **Investigator: Charles Westoff, Princeton University**
6. **Socioeconomic determinants of the use of contraception (Thailand)**
   **Investigator: WFS Central Staff**
7. **Breast-feeding and its impact on fertility (Nepal)**
   **Investigator: WFS Central Staff**
8. **Socioeconomic determinants of fertility preferences (Sri Lanka)**
   **Investigator: Thomas W. Pullum, University of Washington**
9. **Use of contraception as related to fertility preferences (Colombia)**
   **Investigator: Corporación Centro Regional de Población**
10. **Family structure and fertility (Sri Lanka)**
    **Investigator: Jack Caldwell, Australian National University**
11. **Socioeconomic determinants of cumulative fertility (Sri Lanka)**
    **Investigator: WFS Central Staff**
12. **Levels and differentials in infant and child mortality (Colombia)**
    **Investigator: Jorge Somoza, Centro Latinoamericano de Demografía**

It is intended that the majority, if not all, of these studies will be completed and published during 1979.

A series of 10 Technical Bulletins is being prepared to supplement the illustrative analyses. Some deal with already known and used techniques of analysis, while others are quite innovative. The titles and authors of these Bulletins are the following:

1. **Some notes on statistical problems likely to arise in the analysis of WFS surveys**
   **Author: Sir Maurice Kendall**
2. **Path analysis and model building**
   **Authors: Sir Maurice Kendall and C. O'Muircheartaigh**
3. **Standardization**
   **Author: T. Pullum**
4. **Suggested fertility measures from the WFS core questionnaire**
   **Author: T. Pullum**
5. **Generalized linear models for cross-classified data from the WFS**
   **Author: R. Little**
6. **Birth interval analysis**
   **Author: K. Srinivasan**
7. **Estimation of fertility trends from birth data**
   **Author: W. Brass**
8. **Results of the evaluation of the Fiji survey data**
   **Authors: A. Coale and J. Potter**
9. **The own-children method**
   **Author: L.-J. Cho**
10. **Life table methods**
    **Author: D. Smith**

Bulletins 1 to 3 and 5 have been published (71-74), Bulletins 4, 6, and 7 are under discussion, and Bulletins 8 to 10 are being drafted.

These Technical Bulletins, together with the illustrative analyses, are expected to provide sound guidance for countries interested in pursuing further analysis of their survey data. To date only a handful of countries have submitted projects for further analysis to the funding agencies. With the publication of the illustrative analyses, enthusiasm for in-depth analysis of the WFS surveys is expected to increase.

**Figure 3. The Survey Director of the Nepal Fertility Survey, Jayanti Tuladhar, makes his way on foot to survey pre-test areas in Gorkha village, December 1975. The village is eight hours' walk from the nearest point accessible by motor vehicle.** (Photo courtesy of V.C. Chidambaram)

## HIGHLIGHTS OF WFS DATA IN 15 COUNTRIES

Because of the international scope, promise, and impact of the World Fertility Survey, great interest has been aroused. The first findings have been awaited with curiosity. One of the principal aims of this overview is to highlight findings from the first 15 published reports on the topics of past and present fertility levels, preferences concerning fertility, age at marriage and marital stability, and knowledge, availability, and use of contraceptive methods. These data are drawn from nine countries in the Asia and Pacific region (Bangladesh, Fiji, Indonesia, South Korea, Malaysia, Nepal, Pakistan, Sri Lanka, and Thailand) and from six countries in Latin America (Colombia, Costa Rica, the Dominican Republic, Mexico, Panama, and Peru).*

### Declining Fertility

Data from the World Fertility Survey and other sources indicate that a dramatic decline in fertility levels is underway in many parts of the developing world. Among the 15 countries studied here, there are only three possible exceptions: Bangladesh, Nepal, and Pakistan. In the other 12 countries fertility is clearly declining. Perhaps the best way of illustrating this in summary form is to compare the number of children women of ages 45 to 49 have had in their lives, representing past fertility, with the current total fertility rate (TFR) estimated from survey data (see Figure 1). The TFR essentially indicates what completed family size will be if the fertility rates now prevailing among women

*In Costa Rica and Panama the women surveyed were aged 20 to 49; in all other countries, aged 15 to 49.

of all ages are maintained. Some caution is necessary, as the TFR is based on all women while the other figures are based on ever-married women, but in most countries 98 percent or more of women 45 to 49 have been married. In these cases the difference in the choice of denominators has little effect on the comparison. In some countries — Sri Lanka, Thailand, Mexico, Panama, and Peru, where about 95 percent of women 45 to 49 have been married, and Costa Rica, where about 90 percent have been married — the difference in denominators exaggerates somewhat the extent of the fertility decline.

The most dramatic case of recent, sustained, and appreciable fertility decline is the case, already well-documented, of Costa Rica. There, ever-married women 45 to 49 have had a mean of 7.2 live births, while the current total fertility rate is just 3.8. Almost equally impressive, but less well known, are the cases of Colombia and Thailand. For Colombia the figures are 7.3 compared with 4.2; for Thailand, 6.8 compared with 4.5. The WFS has also gathered evidence of fertility declines in countries where such declines had not been identified previously. In the Dominican Republic the respective figures are 6.8 and 5.4, and in Peru, where family planning until recently was positively discouraged and where there is still no national family planning program (even though the use of traditional contraceptive methods has been widespread), the figures are 6.9 and 5.3. The existence of family planning programs does not seem to be a prerequisite for the onset of a fertility decline in situations like that of Peru, although clearly such programs have played an important role in lowering fertility in countries like Costa Rica and Korea and might have made possible an even more rapid decline in Peru had they existed there.

### Fertility Preferences

Changes in fertility preferences are also documented in the WFS data. Of the currently married fecund women who were questioned, about half want no more children. This figure ranges from more than 60 percent in Bangladesh,* South Korea, Sri Lanka, Colombia, Panama, and Peru to about 30 percent in Nepal (see Table 5).

*In Bangladesh, some women were asked, "Do you want to have another child soon?" instead of "Do you want to have another child sometime?"

**Table 5. Percentage of Currently Married Fecund Women Who Want No More Children and of Those with at Least One Birth or Currently Pregnant Who Did Not Want Last Child or Current Pregnancy**

| | % wanting no more children | % not wanting last child or current pregnancy |
|---|---|---|
| **ASIA & PACIFIC** | | |
| **Bangladesh** | 61* | NA |
| **Fiji** | 50 | 27.7 |
| **Indonesia** | 39 | 16.8** |
| **Korea, Rep. of** | 72 | 36.7 |
| **Malaysia** | 43 | NA |
| **Nepal** | 30 | NA |
| **Pakistan** | 49 | NA |
| **Sri Lanka** | 61 | 33.9 |
| **Thailand** | 57 | NA |
| **LATIN AMERICA** | | |
| **Colombia** | 61 | 42.0 |
| **Costa Rica** | 52 | 28.3 |
| **Dominican Republic** | 45 | NA |
| **Mexico** | 57 | NA |
| **Panama** | 63 | 33.3 |
| **Peru** | 61 | 46.1 |

NA = not available
*Some women were asked: "Do you want another child soon?"
**Ever-married women as base

Source: First Country Reports. For Column 1: Table 3.1.1, except Fiji, G1; Indonesia: 4.1.1; Thailand, 3.1.1. For Column 2: Table 3.1.4, except Fiji, G30; Indonesia, 4.1.3.

Even more significant may be the number of currently married women with at least one birth or currently pregnant who did not want their last child or current pregnancy. Where data are available, they show that, except in Indonesia, more than one-quarter of these women did not want their last child or current pregnancy (see Table 5).

In a further analysis of WFS data, James Brackett, Reimert Ravenholt, and John Chao note that the desire for no more children is substantial in all socioeconomic groups, including the rural and the least educated (86). Of course, rural and uneducated women tend to have large families, and this is indeed one reason they want no more children. As Table 6

**Table 6. Percentage of Currently Married Fecund Women with Four Children[a] Who Want No More, by Residence, Education, and Husband's Occupation**

| | Residence | | | Education | | | Husband's Occupation | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All | Rural | Urban | None | Primary | Secondary | Agricultural | Unskilled | Semi-skilled | Professional/ Managerial |
| **ASIA & PACIFIC** | | | | | | | | | | |
| **Bangladesh[b]** | 77 | 76 | 87 | 75 | 81 | 98 | 78 | —— 74[c] —— | | 71 |
| **Fiji** | 67 | 60 | 78 | 72 | 65 | 71[d] | 59 | 79 | 69 | 68[e] |
| **Indonesia** | 57 | 56 | 66 | 54 | 58 | 75[d] | 58 | —— 57 —— | | 65[e] |
| **Korea, Rep. of** | 92 | 88 | 95 | 89 | 92 | 96 | 88 | 98 | 91 | 100 |
| **Malaysia** | 52 | 46 | 76 | 49 | 54 | 64 | 46 | —— 54[f] —— | | 55 |
| **Nepal** | 58 | 58[g] | 58[h] | 58 | (53) | (100) | NA | NA | NA | NA |
| **Pakistan[i]** | 69 | 67 | 76 | 68 | 70 | 87[d] | NA | NA | NA | NA |
| **Sri Lanka** | 87 | 86 | 91 | 80 | 85 | 92 | 84 | 92 | 92 | 83 |
| **Thailand** | 81 | 82 | 75 | 84 | 80[j] | (86)[k] | 80 | (100) | 84 | (92) |
| **LATIN AMERICA** | | | | | | | | | | |
| **Colombia** | 79 | 76 | 81 | 78 | 78 | 81 | NA | NA | NA | NA |
| **Costa Rica** | 68 | 64 | 61 | (82) | 64 | 75 | NA | NA | NA | NA |
| **Dominican Republic** | 62 | 63 | 59 | (50) | 64 | (50) | 53 | (71) | 66 | (75) |
| **Panama** | 82 | 79 | 84 | 73[l] | 79 | 88 | 74 | (50) | 86 | 88[e] |

NA = not available
Note: Parentheses indicate n<25.
[a]Including current pregnancies
[b]Some women were asked: "Do you want another child soon?"
[c]"Other Occupation"
[d]Secondary and higher
[e]Includes clerical
[f]"Other" and "Production and Related"
[g]Mountain
[h]Hill and terai
[i]Frequencies not available
[j]Grades 1-4
[k]Grades 5-10
[l]Less than 4 years and illiterate

Source: First Country Reports. Data from Tables 3.1.1, 3.1.3, except Fiji, G1, G3, G4; Indonesia, 4.1.1, 4.1.2; Thailand, 3.1.1, 3.1.2.

**Table 7. Preferences Regarding Fertility**

| | Percentage of women with two children who want no more* | Of women who express preference, percentage who want a boy next* | Percentage of women who do not care if next is a boy or a girl* |
|---|---|---|---|
| **ASIA & PACIFIC** | | | |
| **Bangladesh** | 67 | 98 | 32 |
| **Fiji** | 36 | 69 | NA |
| **Indonesia** | 35 | 61 | 51 |
| **Korea, Rep. of** | 71 | 99 | 19 |
| **Malaysia** | 25 | NA | NA |
| **Nepal** | 27 | 97 | 27 |
| **Pakistan** | 35 | NA | NA |
| **Sri Lanka** | 60 | 88 | 29 |
| **Thailand** | 51 | 50 | 31 |
| **LATIN AMERICA** | | | |
| **Colombia** | 53 | 47 | 19 |
| **Costa Rica** | 35 | 51 | 61 |
| **Dominican Republic** | NA | NA | NA |
| **Mexico** | 41 | 65 | 48 |
| **Panama** | NA | 39 | 29 |
| **Peru** | 50 | 62 | 41 |

NA = not available

Note: Women sterilized for contraceptive purposes are treated as fecund women who want no more children.

*Restricted to currently married nonpregnant fecund women with one living son and one living daughter

Source: First Country Reports. For Column 1: Table 3.2.1, except Bangladesh, Korea, 3.4.1; Fiji, G5; Indonesia, 3.4.1; Thailand, 3.2.1A. For Column 2: Table 3.2.1, except Bangladesh, Korea, Mexico, Peru, 3.4.1; Colombia, Costa Rica, 3.2.2; Fiji, G7; Indonesia, 4.4.1. For Column 3: Table 3.2.3, except Bangladesh, Korea, Colombia, Mexico, Peru, 3.4.3; Indonesia, 7.5.

shows, however, among currently married fecund women with four living children, the difference between urban and rural women, between educated and uneducated women, and between women whose husbands hold high and low level jobs is in most cases less than 10 percentage points. These results appear to support the conclusion that these women's desire for no more children may be less influenced by socioeconomic development than by practical recognition of the burdens of supporting a large family "under difficult circumstances" (86).

While nowhere in the developing world is the two-child family yet considered the norm, there are indications that large numbers of women in some countries are coming to view this family size as their target. In Bangladesh, South Korea, Sri Lanka, Thailand, Colombia, and Peru, half or more of the women with two children — a son and a daughter — state that they want no more (see Table 7). In another five countries over 30 percent of such women want no more children. The real exceptions to this pattern are Malaysia and Nepal, where over three-quarters of women with two children either want more or express no preference.

The preference for sons over daughters still very much characterizes a large part of Asia. In Bangladesh, South Korea, and Nepal, over 95 percent of women with one living son and one living daughter who want another child and state a sex preference would prefer the next to be a boy (see Table 7). The only exception in the Asian countries analyzed is Indonesia, where roughly half of the women do not care one way or the other. In Latin America, the more traditional societies of Mexico and Peru prefer boys, but not to the same extent as in most of Asia. In Panama there is some degree of preference for daughters.

### Age at Marriage

Mean age at marriage is a useful gauge for comparing marriage patterns across societies or across groups within a given society. In WFS reports this mean is calculated for women aged 25 or more who married before age 25. The results show that women in most areas of Asia and the Middle East marry earlier than women in Latin America and that women with secondary education marry, on average, about two years later than women with only primary school education. (See Table 8.)

A comparison of the cohorts, or age groups, of women now age 25 to 29 and 40 to 44 shows that in many countries the

**Table 8. Marital Formation**

| | Percentage of women 20-24 still single | Mean age at first marriage[a] |
|---|---|---|
| **ASIA & PACIFIC** | | |
| **Bangladesh** | 5 | 12.5[b] |
| **Fiji** | 35 | 18.1 |
| **Indonesia** | 20 | 15.8 |
| **Korea, Rep. of** | 55 | 19.9 |
| **Malaysia** | 50 | 18.1 |
| **Nepal** | 6 | 15.5 |
| **Pakistan** | 22 | 16.9 |
| **Sri Lanka** | 61 | 18.7 |
| **Thailand** | 41 | 19.2 |
| **LATIN AMERICA** | | |
| **Colombia** | 44 | 18.9 |
| **Costa Rica** | 45 | 19.5 |
| **Dominican Republic** | 29 | 17.8 |
| **Mexico** | 38 | 18.4 |
| **Panama** | 35 | 18.7 |
| **Peru** | 48 | 18.9 |

Note: Many first country reports show mean age in completed years, while here it is shown in exact years.

[a]Restricted to women of 25 years or over who first married (legally or in common law) before the age of 25, except Bangladesh

[b]Bangladesh only: restricted to women of 20 or over who first married before the age of 20

Source: First Country Reports. For Column 1: Bangladesh, Table II.4; Fiji, 17; Indonesia, 0.1.3A; Korea, II.3; Malaysia, (data from separate tabulation); Nepal, 4.1; Pakistan, 3.2; Sri Lanka, II.4; Thailand, 0.1.3; Colombia, 1.1.1; Costa Rica, 19; Dominican Republic, 27; Mexico, II.3; Panama, 33; Peru, 0.2.1. From Column 2: Table 1.1.3A, except Bangladesh, Indonesia, Nepal, 1.1.3; Fiji, D3; Pakistan, 3.6.

**Table 9. Mean Age at First Marriage**

| | Women aged 25-29[a] | Women aged 40-44[a] |
|---|---|---|
| **ASIA & PACIFIC** | | |
| **Bangladesh[b]** | 12.8 | 12.1 |
| **Fiji** | 18.8 | 17.6[c] |
| **Indonesia** | 16.2 | 15.6 |
| **Korea, Rep. of** | 21.6 | 18.6 |
| **Malaysia** | 19.3 | 17.6 |
| **Nepal** | 15.4 | 15.6 |
| **Pakistan** | 17.5 | 16.2 |
| **Sri Lanka** | 19.4 | 18.2 |
| **Thailand** | 19.2 | 18.9 |
| **LATIN AMERICA** | | |
| **Colombia** | 18.8 | 19.0 |
| **Costa Rica** | 19.6 | 19.4 |
| **Dominican Republic** | 17.6 | 17.6 |
| **Mexico** | 18.6 | 18.2 |
| **Panama** | 19.1 | 18.4 |
| **Peru** | 18.9 | 19.0 |

[a]Restricted to women who first married (legally or in common law) before age 25, except Bangladesh
[b]Bangladesh only: restricted to women who married before age 20
[c]Age 40 and older

Source: First Country Reports. Table 1.1.3A, except Bangladesh, Indonesia, Nepal, 1.1.3; Fiji, D3; Pakistan, 3.6.

mean age at which women first marry, whether legally or consensually, is rising. This is especially true for societies characterized by early entrance into matrimony, like Bangladesh, with a mean age of 12.5 years. It is also true in those Asian societies where women tend to marry late, such as South Korea and Sri Lanka, with mean ages of 19.9 and 18.7 years, respectively (see Table 8). The most dramatic change has occurred in Korea, where age at marriage for those marrying before age 25 has risen from 18.6 to 21.6 years, with smaller changes taking place in many of the other Asian countries (see Table 9). In most of the Latin American countries, with the sole exception of Panama, the age of marriage has changed very little.

Overall, mean age at marriage is not a sensitive indicator of recent secular trends, since the analysis is restricted to women over the age of 25 who first married before the age of 25. For even the youngest age group in such an analysis, those currently 25 to 29, the data refer to an event which happened, on average, 8 or 9 years before the survey; for those now aged 45 to 49, to an event occurring almost 30 years prior to the survey. Memory, especially among illiterate people, may be faulty. Even if recollection is accurate, such analyses will not give a true picture of very recent changes, as is the case with age at marriage in Bangladesh, for example. Although nearly 80 percent of the married Bangladesh women in their late 20s who were surveyed had been married by age 15, among the women aged 15 at the time of the household survey only 47 percent were married (2). To study recent trends, attention should be directed to complete birth cohorts (age groups) of women, both married and single. Trends are detected by examining, for successive cohorts, the proportion who first married prior to a given age, for example, 15, 20, or 25.

Nevertheless, recent and rapid changes in age at first marriage are detectable from WFS data in a number of countries. Two examples will suffice. In Sri Lanka and Malaysia, where age at first marriage has averaged less than 19 years, currently the percentage of women 20 to 24 who have ever entered into a marital union is only 39 percent and 50 percent, respectively. Quite obviously, by the time this cohort reaches the age of 50 their mean age at first marriage will be several years higher than the current mean of under 19 years (see Table 8).

### Marital Stability

The degree of stability of marital unions varies considerably across countries, but the total amount of time that women spend in marital unions is much more uniform. Figures on the percentage of ever-married women who have been married more than once vary from a low of 4 percent for South Korea, Pakistan, and Sri Lanka to a high of 32 percent for Indonesia and the Dominican Republic (see Table 10). But where separation and divorce are most common, remarriage is also the rule. Hence the proportion of elapsed time since date of first marriage spent in marital union varies much less across countries, and across social groups within countries, than do the figures on the number of times married.

In the countries in which only 4 percent of the women have been married more than once, women have, on the average, spent 97 percent of the elapsed time since first marriage in marital union. For the three countries where separation and remarriage are most common (Indonesia, the Dominican Republic, and Panama), women have spent 88 percent of the elapsed time in marital union. Since the elapsed time spent in marital union is a measure of the exposure of women to the risk of childbearing, and inasmuch as it generally varies by less than 10 percent across groups within societies and across societies themselves, it is not surprising that fertility bears little relationship to marital stability.

**Table 10. Marital Stability**

| | Percentage of ever-married women who have been married more than once | Proportion of elapsed time since date of first marriage spent in marital union |
|---|---|---|
| **ASIA & PACIFIC** | | |
| **Bangladesh** | 13 | 93 |
| **Fiji** | 8 | 96 |
| **Indonesia** | 32 | 91 |
| **Korea, Rep. of** | 4 | NA |
| **Malaysia** | 13 | 91 |
| **Nepal** | NA | 96 |
| **Pakistan** | 4 | 98 |
| **Sri Lanka** | 4 | 95 |
| **Thailand** | 12 | 89 |
| **LATIN AMERICA** | | |
| **Colombia** | 14 | 91 |
| **Costa Rica** | 9 | 93 |
| **Dominican Republic** | 32 | 84 |
| **Mexico** | 8 | 93 |
| **Panama** | 25 | 89 |
| **Peru** | 11 | 93 |

NA = not available

Source: First Country Reports. For Column 1: Table 1.3.1, except Fiji, D5; Indonesia: 4.1.1; Thailand, 3.1.1. For Column 2: Table 3.1.4, except Fiji, G30;

### Early Marital Fertility

There are interesting variations in the timing of fertility with respect to the date of marriage, both among countries within regions and among regions (see Table 11). The percentage of

**Table 11. Early Marital Fertility**

| | Percentage of first births occurring before, or within first 7 months of, mother's first marital union[a] | Mean number of children born before, or in the 5 years following, date of first marital union |
|---|---|---|
| **ASIA & PACIFIC** | | |
| **Bangladesh** | NA | 1.0 |
| **Fiji** | [b] | 1.9 |
| **Indonesia** | 9 | 1.2 |
| **Korea, Rep. of** | 6 | 1.6 |
| **Malaysia** | 11 | 1.9 |
| **Nepal** | NA | 0.9 |
| **Pakistan** | NA | 1.5 |
| **Sri Lanka** | 7 | 1.9 |
| **Thailand** | 12 | 1.7 |
| **LATIN AMERICA** | | |
| **Colombia** | 20 | 2.3 |
| **Costa Rica** | 26[c] | 2.4 |
| **Dominican Republic** | 6 | 2.2 |
| **Mexico** | 13 | 2.1 |
| **Panama** | 18 | 2.0 |
| **Peru** | 28 | 2.2 |

NA = Information not available, but figures assumed to be 0
[a] Based on women first married at least 5 years ago
[b] Before marriage: 5.1; within 11 months of marriage: 7.8.
[c] Base excludes women who had no children before 5 years of marriage.
Source: First Country Reports. For Column 1: Table 2.1.1, except Fiji, E9; Indonesia, 3.5.1. For Column 2: Table 2.1.2A, except Fiji, E10; Indonesia, 3.5.2; Pakistan, 2.1.2; Panama, 2.1.2B.

**Table 12. Age at Marriage and Early Fertility in Countries of Asia and Latin America**

| | No. of countries | Mean age at marriage | Premarital conceptions of first births (%) | Mean no. of births in first five years |
|---|---|---|---|---|
| **ASIA** | | | | |
| **Early marriage** | 4 | 15.2 | 3 | 1.2 |
| **Late marriage** | 5 | 18.7 | 9 | 1.8 |
| **LATIN AMERICA** | | | | |
| **Early marriage** | 3 | 18.3 | 13 | 2.1 |
| **Late marriage** | 3 | 19.1 | 25 | 2.3 |

premarital conceptions among first births varies from presumably zero in Bangladesh, Nepal, and Pakistan to well over 20 percent in some Latin American countries. In the same way, the mean number of children born by women either before or within the five years following the date of first marriage varies from 0.9 for Nepal to 2.4 for Costa Rica. The average for the nine Asian countries is 1.5, and for the six Latin American countries is 2.2.

In interpreting the figures in Table 11 it is useful to refer back to Table 8. Dividing the Asian and Latin American regions each into two groups based on age at marriage, it becomes clear that early marital fertility is associated with an older age at marriage (see Table 12). In the Latin American countries characterized by late marriage, at an average of 19.1 years, women have an average of 2.3 births in the first five years, whereas in the early-marrying Asian countries with a mean age at marriage of 15.2, women have an average of 1.2 births in the first five years. Thus, although an increase in age at marriage would be expected to lower completed fertility by reducing the number of years that women are exposed to the risk of childbearing, this is partly compensated for by a tendency of late marrying women to have more children in the first few years of marriage.

**Table 13. Contraceptive Knowledge and Use**

| | Percentage of ever-married women who have heard of a contraceptive method[a] | Percentage of ever-married women who have used a contraceptive method |
|---|---|---|
| **ASIA & PACIFIC** | | |
| **Bangladesh** | 82 | 14 |
| **Fiji** | 100[b] | 68 |
| **Indonesia** | 77 | 34 |
| **Korea, Rep. of** | 97 | 57 |
| **Malaysia** | 92 | 46 |
| **Nepal** | 22 | 4 |
| **Pakistan** | 75 | 10 |
| **Sri Lanka** | 91 | 43 |
| **Thailand** | 96 | 45 |
| **LATIN AMERICA** | | |
| **Colombia** | 96 | 59 |
| **Costa Rica** | 100[c] | 82 |
| **Dominican Republic** | 97 | 47 |
| **Mexico** | 90 | 45 |
| **Panama** | 98 | 73 |
| **Peru** | 82 | 49 |

[a]Prompted question except in Pakistan, where only spontaneous responses were used.
[b]The precise figure is 99.9 percent.
[c]The precise figure is 99.6 percent.

Source: First Country Reports. For Column 1: Table 4.2.2A, except Bangladesh, 4.2.2; Colombia, Dominican Republic, Pakistan, 4.2.1A; Costa Rica, 4.2.1B; Fiji, H1; Indonesia, 2.1.1C. For Column 2: Table 4.3.1, except Bangladesh, Colombia, Korea, Nepal, 4.3.1A; Costa Rica, 4.3.1B; Dominican Republic, 4.3.1B; Fiji, H3; Indonesia, 2.4.1C.

### Knowledge, Availability, and Use of Contraceptives

In all but one of the 15 countries surveyed, three-quarters or more of ever-married women have heard of at least one contraceptive method, and in 10 of them this figure is 90 percent or higher (see Table 13). Only in Nepal, where a mere 22 percent have heard of a method, has the message not come across. In all but three countries, the best known method is the pill, followed by sterilization and the IUD. Traditional methods such as withdrawal and abstinence are cited by less than half of the women in most countries. The near universality of knowledge concerning contraception is a tribute to the efforts of concerned people working in family planning programs around the world. (See Table 14.)

There is much more intercountry variability when it comes to the percentage of ever-married or currently married women who have actually used a contraceptive at some time (see Tables 13, 15, and 16). The figure for ever-married women varies from a low of 4 percent in Nepal to a high of 82 percent in Costa Rica. The most startling contrasts between knowledge and use occur in Bangladesh and Pakistan. In both countries 70 percent or more of currently married fecund women say that they have heard of contraception, but only 15 percent and 10 percent, respectively, report ever having used a method (see Tables 14 and 16).

On the whole, countries with strong family planning programs show the highest levels of knowledge about and practice of family planning. WFS data can be useful in pointing to important weaknesses in national family planning programs. For example, as one analysis observes,

> Pakistan succeeded in educating a substantial majority of women about family planning but did not succeed in effectively delivering services and supplies. Only 32 percent of the Pakistan respondents knew where to get family planning and only 29 percent had been visited by or had met a family planning worker, even though most of the country was supposedly covered by male-female teams who were to contact every couple in their area four times per year. To date the Nepal program has had only modest success in educating the public about family planning and very little success in providing services and supplies. Only 22 percent of the respondents knew any method of contraception and only 6 percent knew where to get contraceptives (86).

Figures on the current use of contraception by women exposed to the risk of pregnancy show the same pattern of variation among countries as do the figures on ever-use (see Table 17). Costa Rica and Panama exhibit the highest current use rates (78 percent and 65 percent, respectively), while in Nepal, Pakistan, and Bangladesh, 10 percent or fewer of exposed women are currently using a method. In general, the figures for Latin America are higher than for Asian countries.

The picture changes somewhat when attention is directed to the current use of "modern," or effective, methods. (Modern methods include sterilization, pill, injection, IUD, condom, and such female methods as the diaphragm, jellies, and creams.) On the average, across all countries, three-quarters of current users are using a modern method. But in Peru and Sri Lanka, with identical figures on current use (41 percent), only 15 percent and 24 percent, respectively, of exposed women are using a modern method. By contrast, Indonesia, Thailand, the Dominican Republic, and Mexico, with about the same

## Table 14. Percentage of Currently Married Fecund Women Who Have Heard of Specific Contraceptive Methods

| | No method heard of | Any method | Ineffective only[a] | Effective[b] | Sterilization | | Pill | IUD | Injection | Condom | Female local | Douche | Withdrawal | Rhythm | Abstinence | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Female | Male | | | | | | | | | | |
| **ASIA & PACIFIC** | | | | | | | | | | | | | | | | |
| **Bangladesh** | 17 | 83 | 2 | 81 | 54 | 53 | 66 | 41 | 0 | 22 | 10 | 32 | 16 | 29 | 12 | 5 |
| **Fiji** | 0 | 100 | 0 | 100 | 96 | 41 | 99 | 97 | 50 | 85 | —41— | | 56 | 58 | 57 | 5 |
| **Indonesia** | 18 | 82 | 1 | 81 | 13 | 9 | 76 | 55 | 20 | 46 | 5 | 4 | 9 | 14 | 14 | NA |
| **Korea, Rep. of** | 1 | 99 | 0 | 99 | 68 | 87 | 96 | 93 | 6 | 80 | 24 | 29 | 40 | 64 | 27 | 3 |
| **Malaysia** | 7 | 94 | 2 | 92 | —75— | | 90[c] | 43 | [c] | 56 | —28— | | 32 | 41 | 32 | 23 |
| **Nepal** | 78 | 23 | 1 | 21 | 13 | 16 | 12 | 6 | NA | 5 | NA | NA | NA | NA | 5 | 1 |
| **Pakistan** | 29 | 71 | 0 | 71 | 6 | 2 | 64 | 48 | NA | 15 | 7 | NA | 2 | 0 | 0 | 0 |
| **Sri Lanka** | 7 | 93 | 0 | 93 | 85 | 41 | 83 | 65 | 45 | 55 | 12 | 9 | 22 | 47 | 33 | 3 |
| **Thailand** | 3 | 97 | 0 | 97 | 88 | 72 | 93 | 88 | 74 | 51 | 24 | | ——57—— | | | 0 |
| **LATIN AMERICA** | | | | | | | | | | | | | | | | |
| **Colombia** | 4 | 96 | 1 | 95 | 73 | 40 | 91 | 83 | 72 | 61 | 57 | 40 | 48 | 58 | 28 | 8 |
| **Costa Rica** | 0 | 100 | 0 | 100 | 94 | 68 | 98 | 93 | 89 | 92 | 72 | 60 | 68 | 82 | 31 | 7 |
| **Dominican Republic** | 3 | 97 | 0 | 97 | 94 | 30 | 92[d] | 77 | [d] | 71 | —70— | | 57 | 42 | NA | 6 |
| **Mexico[e]** | 10 | 90 | 0 | 90 | 63 | 40 | 84 | 76 | 71 | 43 | 44 | 38 | 49 | 50 | NA | 5 |
| **Panama** | 1 | 99 | 0 | 99 | 94 | 64 | 96 | 89 | NA | 76 | 56 | 62 | 61 | 66 | 35 | 0 |
| **Peru** | 17 | 83 | 4 | 79 | 61 | 19 | 64 | 44 | 63 | 40 | 32 | 48 | 41 | 56 | 24 | 11 |

NA = not available
[a]Ineffective methods include douche, rhythm, withdrawal, abstinence, and "other."
[b]Effective methods include pill, IUD, injection, male and female sterilizations, female local, and condom.
[c]Malaysia — Injection included with pill
[d]Dominican Republic — Injection included with pill
[e]Mexico — 21 percent of women have also heard of diaphragm.

Source: First Country Reports. Table 4.2.1B, except Costa Rica, 4.2.1C; Fiji, H2; Indonesia, 2.1.1B.

## Table 15. Percentage of Ever-Married Women Who Have Ever Used Specific Contraceptive Methods[a]

| | No method ever used | Any method | Ineffective only | Effective | Sterilization | | Pill | IUD | Injection | Condom | Female local | Douche | Withdrawal | Rhythm | Abstinence | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Female | Male | | | | | | | | | | |
| **ASIA & PACIFIC** | | | | | | | | | | | | | | | | |
| **Bangladesh** | 86 | 14 | 4 | 10 | 0 | 0 | 5 | 1 | 0 | 5 | 1 | 2 | 3 | 5 | 2 | 1 |
| **Fiji[b]** | 32 | 68 | 11 | 57 | —15— | | 31 | 16 | 1 | 16 | —4— | | 15 | 16 | 10 | 1 |
| **Indonesia** | 66 | 34 | 4 | 30 | 0 | 0 | 23 | 7 | 1 | 5 | 0 | 0 | 2 | 3 | 4 | NA |
| **Korea, Rep. of** | 43 | 57 | 5 | 52 | 2 | 3 | 33 | 25 | 1 | 22 | 3 | 4 | 12 | 16 | 2 | 1 |
| **Malaysia** | 54 | 46 | 11 | 35 | 3 | 0 | 32[c] | 2 | [c] | 9 | —2— | | 8 | 10 | 4 | 6 |
| **Nepal** | 96 | 4 | 1 | 3 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| **Sri Lanka** | 57 | 43 | 19 | 25 | —9— | | 8 | 8 | 1 | 5 | 0 | 2 | 6 | 22 | 12 | 0 |
| **Thailand** | 55 | 45 | 6 | 40 | 6 | 2 | 26 | 9 | 5 | 4 | 1 | | ——15—— | | | 0 |
| **LATIN AMERICA** | | | | | | | | | | | | | | | | |
| **Colombia** | 41 | 59 | 12 | 47 | 4 | 0 | 33 | 15 | 3 | 8 | 12 | 5 | 17 | 18 | 5 | 3 |
| **Costa Rica** | 18 | 82 | 9 | 73 | 12 | 1 | 51 | 12 | 9 | 36 | 11 | 5 | 20 | 25 | 4 | 2 |
| **Dominican Republic** | 53 | 47 | 15 | 32 | 11 | 0 | 20[d] | 7 | [d] | 11 | —9— | | 19 | 7 | NA | 1[d] |
| **Mexico[e]** | 55 | 45 | 10 | 35 | 3 | 0 | 26 | 8 | 7 | 7 | 7 | 5 | 18 | 13 | NA | 1 |
| **Panama** | 27 | 73 | 10 | 62 | 21 | 0 | 42 | 8 | NA | 13 | 9 | 10 | 18 | 16 | 8 | 0 |
| **Peru** | 52 | 49 | 26 | 23 | 3 | 0 | 13 | 3 | 5 | 7 | 5 | 15 | 17 | 27 | 7 | 3 |

NA = not available
[a]This table was run also for currently married fecund women in the following countries: Bangladesh, Indonesia, Rep. of Korea, Nepal, Mexico, and Peru. See Table 16.
[b]Fiji — Breast-feeding specified as method in Questionnaire; 6.8 percent of women had used this method.
[c]Malaysia — Injection included with pill
[d]Dominican Republic — Injection included with pill
[e]Mexico — 0.7 percent of women have also used diaphragm.

Source: First Country Reports. Table 4.3.1A, except Fiji, H3; Indonesia, 2.4.1A; Malaysia, Sri Lanka, Thailand, Dominican Republic, Panama, 4.3.1.



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# Countries Participating in the World Fertility Survey as of April 1979, by Progress Status

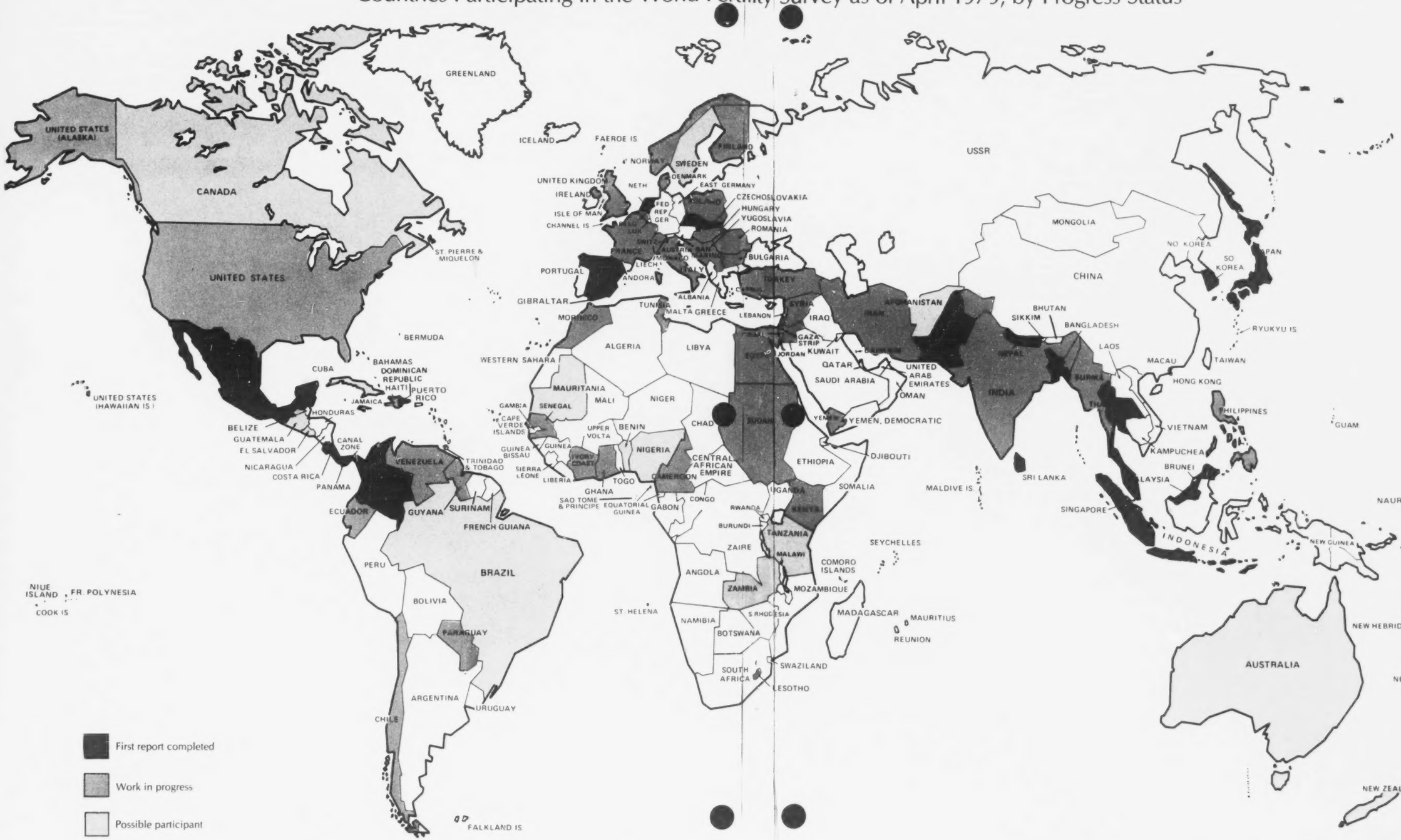






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**Table 16. Percentage of Currently Married Fecund Women Who Have Ever Used Specific Contraceptive Methods**

| | No method ever used | Any method | Ineffective only | Effective | Sterilization | | Pill | IUD | Injection | Female | | | Withdrawal | Rhythm | Abstinence | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Female | Male | | | | Condom | local | Douche | | | | |
| **ASIA & PACIFIC** | | | | | | | | | | | | | | | | |
| **Bangladesh** | 85 | 15 | 4 | 11 | 0 | 1 | 6 | 1 | 0 | 5 | 1 | 2 | 3 | 5 | 3 | 1 |
| **Indonesia** | 56 | 44 | 4 | 39 | 0 | 0 | 30 | 9 | 1 | 6 | 0 | 1 | 3 | 4 | 4 | 7 |
| **Korea, Rep. of** | 37 | 63 | 5 | 58 | 2 | 4 | 38 | 27 | 1 | 25 | 3 | 4 | 14 | 19 | 3 | 1 |
| **Nepal** | 96 | 5 | 1 | 4 | 0 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| **Pakistan**[a] | 90 | 10 | 2 | 8 | —— 1 —— | | 4 | 4 | NA | 3 | 1 | NA | 0 | 0 | 2 | 1 |
| **LATIN AMERICA** | | | | | | | | | | | | | | | | |
| **Mexico**[b] | 50 | 51 | 10 | 40 | 3 | 0 | 29 | 10 | 8 | 7 | 8 | 4 | 14 | 20 | NA | 1 |
| **Peru** | 48 | 52 | 27 | 25 | 3 | 0 | 15 | 3 | 5 | 7 | 5 | 16 | 18 | 29 | 8 | 3 |

NA = not available

Note: Data not available for Fiji, Malaysia, Sri Lanka, Thailand, Colombia, Costa Rica, the Dominican Republic, and Panama. See Table 15 for data on ever-married women in these and other countries.

[a]Base is all currently married women, including those not fecund.
[b]Mexico — 0.7 percent of women have also used diaphragm.

Source: First Country Reports. Table 4.3.1B, except Indonesia, 2.4.1B; Pakistan, 4.3.1.

level of overall use as Peru and Sri Lanka, show more than 30 percent of exposed women using a modern method (see Tables 17 and 18).

One of the most striking findings in the area of contraceptive use is the high incidence of male or female sterilization for contraceptive purposes. As Table 17 shows, the proportion of currently married, fecund, nonpregnant women (exposed women) sterilized for contraceptive purposes — or with the husband sterilized — is 11 percent in Thailand, about 15 percent in Sri Lanka, the Dominican Republic, and Costa Rica, 22 percent in Fiji, and 26 percent in Panama. Indeed, contraceptive sterilization has displaced the pill as the most popular modern method of contraception in four of these six countries and is the second most used modern method, after the pill, in Malaysia, Thailand, and Costa Rica. Nepal is an interesting case. There are very few users but practically all of them rely on contraceptive sterilization. (See also Table 19.)

### Unmet Need

An important application of WFS data is to determine the extent of unmet need for family planning services. The concept of

**Table 17. Percent Distribution of Exposed[a] Women According to Current Use of Specific Contraceptive Methods**

| | No method used | Any method | Sterilization | | Pill | IUD | Injection | Condom | Female | | Withdrawal | Rhythm | Abstinence | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Female | Male | | | | | local | Douche | | | | |
| **ASIA & PACIFIC** | | | | | | | | | | | | | | |
| **Bangladesh** | 90 | 10 | 0 | 1 | 3 | 1 | NA | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| **Fiji** | 44 | 56 | —— 22 —— | | 11 | 6 | NA | 8 | NA | NA | 3 | 3 | NA | 2 |
| **Indonesia** | 63 | 37 | 0 | 0 | 21 | 8 | 0 | 3 | 0 | 0 | 1 | 1 | 1 | 2 |
| **Korea, Rep. of** | 54 | 46 | 2 | 4 | 11 | 10 | 0 | 7 | 0 | 0 | 3 | 6 | 1 | 0 |
| **Malaysia** | 58 | 43 | 4 | 1 | 21[b] | 1 | [b] | 4 | —— 0 —— | | 3 | 5 | 2 | 3 |
| **Nepal** | 97 | 3 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Pakistan** | 93 | 7 | 1 | 0 | 1 | 1 | NA | 1 | 0 | NA | 0 | 0 | 2 | 0 |
| **Sri Lanka** | 59 | 41 | —— 13 —— | | 2 | 6 | 0 | 3 | 0 | 0 | 2 | 10 | 5 | 0 |
| **Thailand** | 55 | 46 | 8 | 3 | 19 | 8 | 3 | 1 | 0 | ———— 3 ———— | | | | 1[c] |
| **LATIN AMERICA** | | | | | | | | | | | | | | |
| **Colombia** | 48 | 52 | 5 | 0 | 16 | 10 | 1 | 2 | 3 | 1 | 6 | 6 | 1 | 1 |
| **Costa Rica** | 22 | 78 | 15 | 1 | 27 | 6 | 2 | 11 | 2 | 0 | 6 | 6 | 1 | 1 |
| **Dominican Republic** | 59 | 41 | 16 | 0 | 11[d] | 4 | [d] | 2 | —— 3 —— | | 5 | 2 | NA | 0 |
| **Mexico** | 59 | 42 | 4 | 0 | 15 | 8 | 2 | 1 | 2 | 0 | 5 | 4 | NA | 0 |
| **Panama** | 35 | 65 | 26 | 0 | 21 | 5 | 1 | 2 | 2 | 1 | 4 | 3 | 2 | 0 |
| **Peru** | 59 | 41 | 4 | 0 | 6 | 2 | 1 | 1 | 1 | 4 | 4 | 14 | 3 | 1 |

NA = not available

[a]All currently married, nonpregnant, and fecund women, including those sterilized for contraceptive purposes
[b]Malaysia — Injection included with pill
[c]Thailand — Folk methods included with "other"
[d]Dominican Republic — Injection included with pill

Source: First Country Reports. Table 4.4.1, except Malaysia, Dominican Republic, also 5.3.2; Pakistan, also 5.3.2 revised; Thailand, also 5.2.1; Fiji, H7; Indonesia, 2.3.2.

unmet need can be confusing because it takes account both of intention and of practice and because it can be defined and measured in different ways (85, 100). Basically, the term "unmet need" refers to women with three identifiable characteristics:

1. They are currently married, nonpregnant, and fecund, usually described by the comprehensive term "exposed,"
2. they want no more children, and
3. they are not using (modern) means of contraception.

As Table 18 shows, unmet need can be measured numerically as a percentage of all currently married women; it can be measured as a percentage of all exposed women; or it can be measured as a percentage of all exposed women who want no more children. All of these measures understate the total unmet need for family planning because they do not include those who want to space or postpone births, only those who want no more births at all. An initial analysis of unmet need in five Asian countries was prepared by Charles F. Westoff in 1978 (100) and is expanded in Table 18 to include all 15 countries for which WFS data are now available.

The most conservative definition and measurement uses a base, or denominator, of all currently married women and a numerator of women who are exposed *and* want no more children *and* are not using an efficient modern method. As Table 18 shows, unmet need calculated in this manner (Column 5) runs from a high of 47 percent in Bangladesh and over 30 percent in Korea, Sri Lanka, and Peru to a low of 12 percent in Costa Rica and Fiji.

It should be noted that while the highest need may be in Bangladesh and Peru, where about 60 percent of the women want no more children but only 6 percent and 15 percent, respectively, are using a modern method, unmet need is also high in South Korea, where 74 percent want no more children

**Table 18. Percentage of Exposed* Women Who Want No More Children, Percentage Not Currently Using Contraception, and Estimates of Unmet Need for Effective Contraception in 15 Developing Countries**

| | (1) | (2) | | (3) | | (4) | | (5) | |
|---|---|---|---|---|---|---|---|---|---|
| | Of exposed women, % who want no more children | Of exposed women, % not using | | Of exposed women who want no more, % not using | | Of all exposed women, % who want no more *and* are not using | | Of all currently married women, % who are exposed *and* want no more *and* are not using | |
| | | any method | modern method | any method | modern method | any method | modern method | any method | modern method |
| **ASIA & PACIFIC** | | | | | | | | | |
| **Bangladesh**** | (N = 4643) **64** | (N = 4643) **90** | **94** | (N = 2974) **86** | **91** | (N = 4643) **55** | **60** | (N = 5767) **45** | **47** |
| **Fiji†** | (N = 3314) **51** | (N = 3314) **43** | **51** | (N = 1695) **26** | **34** | (N = 3314) **13** | **17** | (N = 4650) **10** | **12** |
| **Indonesia** | (N = 5628) **40** | (N = 5628) **63** | **68** | (N = 2229) **47** | **54** | (N = 5628) **19** | **21** | (N = 7868) **13** | **15** |
| **Korea, Rep. of** | (N = 3851) **74** | (N = 3851) **54** | **65** | (N = 2856) **44** | **56** | (N = 3851) **33** | **42** | (N = 5051) **25** | **32** |
| **Malaysia** | (N = 4482) **46** | (N = 4482) **58** | **69** | (N = 2071) **47** | **62** | (N = 4482) **22** | **29** | (N = 5802) **17** | **22** |
| **Nepal** | (N = 4325) **30** | (N = 4325) **97** | **97** | (N = 1283) **91** | **92** | (N = 4325) **27** | **27** | (N = 5501) **21** | **21** |
| **Pakistan** | (N = 3335) **42** | (N = 3335) **93** | **95** | (N = 1413) **85** | **90** | (N = 3335) **36** | **38** | (N = 4663) **26** | **27** |
| **Sri Lanka** | (N = 4706) **62** | (N = 4706) **59** | **76** | (N = 2926) **47** | **66** | (N = 4706) **29** | **41** | (N = 6163) **22** | **31** |
| **Thailand** | (N = 2529) **61** | (N = 2529) **55** | **58** | (N = 1553) **44** | **48** | (N = 2529) **27** | **30** | (N = 3482) **20** | **22** |
| **LATIN AMERICA** | | | | | | | | | |
| **Colombia** | (N = 2323) **61** | (N = 2323) **48** | **63** | (N = 1423) **44** | **60** | (N = 2323) **27** | **37** | (N = 2827) **22** | **30** |
| **Costa Rica** | (N = 2222) **52** | (N = 2222) **22** | **35** | (N = 1158) **16** | **29** | (N = 2222) **8** | **15** | (N = 2684) **7** | **12** |
| **Dominican Republic** | (N = 1378) **52** | (N = 1378) **59** | **70** | (N = 717) **43** | **57** | (N = 1378) **23** | **30** | (N = 1808) **17** | **23** |
| **Mexico** | (N = 4107) **56** | (N = 4107) **59** | **68** | (N = 2292) **52** | **63** | (N = 4107) **29** | **35** | (N = 5640) **21** | **26** |
| **Panama** | (N = 2257) **63** | (N = 2257) **35** | **46** | (N = 1413) **26** | **37** | (N = 2257) **16** | **23** | (N = 2723) **14** | **19** |
| **Peru** | N = 3851) **61** | (N = 3851) **59** | **85** | (N = 2307) **54** | **83** | (N = 3851) **33** | **51** | (N = 5061) **25** | **38** |

*All currently married, nonpregnant, and fecund women, including those sterilized for contraceptive purposes.
**Bangladesh only — Some women were asked: "Do you want another child soon?"
†Fiji only — excludes women in postpartum abstinence

Source: First Country Reports. Bangladesh: Table 5.2.1; Fiji: 113; Indonesia: 4.5.4; Rep. of Korea: 5.2.1; Malaysia: 5.2.3. (figures adjusted to include those sterilized for contraceptive purposes); Nepal: 5.2.3; Pakistan: 5.3.2. (adjusted, see Malaysia); Sri Lanka: 5.2.3; Thailand: 5.2.1 (adjusted, see Malaysia); Colombia: 5.2.3.; Costa Rica: 5.2.3B; Dominican Rep.: 5.2.3 (adjusted, see Malaysia); Mexico: 5.2.1; Panama: 5.2.3; Peru: 5.2.1.

but only 35 percent are using a modern method. Unmet need is lowest in countries with either high fertility ideals, such as Indonesia (15 percent) and Nepal (21 percent), or those characterized by extensive use of modern contraceptives, such as Costa Rica (12 percent) and Panama (19 percent). Across the remaining countries the unmet need for modern family planning to terminate childbearing runs at about the level of 30 percent of currently married women (see Table 18).

Measured in a different way, as a percentage of all exposed women who want no more children (see Column 3, Table 18), the percentage not using modern methods of family planning is considerably higher — in fact, on the average more than twice as high. In Nepal, Bangladesh, and Pakistan, for example, the percentage of exposed women wanting no more children who are not using modern means of family planning is close to 90 percent. In most of the other countries, it is well above 50 percent.

To close this gap between the desire for no more children and the use of modern methods, better knowledge of family planning service outlets and easier access to them are needed, according to an analysis by Germán Rodríguez of the WFS staff (94). In Malaysia, Nepal, and Colombia, the percentage of women not using effective contraceptives among exposed

**Figure 4. The World Fertility Survey builds a national capacity for conducting population surveys by training personnel such as these supervisors in Nepal.** (Photo courtesy of V.C. Chidambaram)

## WORLD FERTILITY SURVEY CONFERENCE, 1980

The International Statistical Institute/World Fertility Survey is organizing a World Conference to be held at the Wembley Conference Centre in London from July 7 to 11, 1980.

The objects of the Conference will be:

1. To give a public account of the substantive findings of the World Fertility Survey to date
2. To give ministers and senior officials concerned with population policies an opportunity to become familiar with the significance of the findings of the Survey
3. To encourage use of the data available and to stimulate further analysis at the country level as well as on a comparative basis
4. To consider the future of inquiries like the WFS.

A Program Committee under the chairmanship of Dr. Mercedes Concepcion and an Organizing Committee under the chairmanship of Sir Maurice Kendall have been established.

The Conference will last five days. About half of the time will be spent in plenary session discussing general policy-related matters; the remainder of the program will consist of simultaneous discussions of methods and substantive results. For each session there will be an organizer and (in most cases) two discussants.

Many at the Conference will be attending at the invitation of ISI/WFS. These invitees will include people concerned with relevant policy matters, representatives of WFS-associated survey organizations in participating countries, representatives from countries likely to participate, and other persons of standing in the field of demography.

There will also be places available for a limited number of other interested persons. They will be responsible for their own expenses and will be charged a registration fee of US $90. Applications can be sent in at any time; they will be acknowledged, but decisions on which can be accepted will only be made later in the year in light of the number received.

Inquiries about the Conference should be addressed to Mr. David Whitelegge, Chief, Information Section, World Fertility Survey, International Statistical Institute, 35-37 Grosvenor Gardens, London SW1W OBS, United Kingdom.

The following subjects will be covered in the various conference sessions:

**Population trends and policies, with emphasis on developments since the World Population Conference at Bucharest in 1974**
**Contribution of WFS to an understanding of the world population situation and to population policies**
**Policy implications of WFS findings (family formation in developing countries, fertility and socioeconomic factors in developing countries, fertility and family planning in developing countries, factors affecting fertility in developed countries)**
**Nuptiality and fertility**
**Subpopulation fertility differentials**
**Sociobiological factors in exposure to child-bearing**
**Multifactor explanation of fertility levels**
**Mortality**
**Fertility preferences**
**Use of family planning services**
**Determinants of fertility change**
**Data collection procedures**
**Data processing**
**Methodology of birth history analysis**
**Multivariate analysis (including standardization)**
**Problems and costs of organizing an international survey**
**Assessment of WFS data**
**Sampling errors and sample design**
**Estimation of fertility trends using WFS and other sources**
**Country case-studies**
**Future of WFS**

## Table 19. Percent Distribution of Exposed[a] Women According to Current Use of Specific Contraceptive Method Among Women Who Do Not Desire Future Birth

| | No method used | Any method | Ineffective only | Effective | Sterilization Female | Sterilization Male | Pill | IUD | Injection | Condom | Female local | Douche | Withdrawal | Rhythm | Abstinence | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ASIA & PACIFIC** | | | | | | | | | | | | | | | | |
| **Bangladesh** | 86 | 14 | 5 | 9 | 1 | 1 | 5 | 1 | NA | 1 | 0 | 0 | 1 | 2 | 2 | 0 |
| **Fiji[b]** | 26 | 74 | 7 | 67 | —43— | | 9 | 7 | NA | 7 | NA | NA | 3 | 3 | NA | 2 |
| **Indonesia** | 47 | 53 | 7 | 46 | 1 | 0 | 27 | 14 | [c] | 4 | 1[c] | —4— | | | | 3 |
| **Korea, Rep. of** | 44 | 56 | 12 | 44 | 3 | 6 | 13 | 13 | 0 | 8 | 0 | 0 | 4 | 7 | 1 | 0 |
| **Malaysia** | 48 | 53 | 15 | 38 | —11— | | 20[d] | 1 | [d] | 5 | —0— | | 4 | 5 | 4 | 3 |
| **Nepal** | 91 | 9 | 0 | 9 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Pakistan** | 85 | 15 | 4 | 11 | 3 | 0 | 3 | 2 | NA | 2 | 1 | NA | 0 | 0 | 3 | 0 |
| **Sri Lanka** | 47 | 54 | 20 | 34 | 20 | 1 | 2 | 8 | 1 | 3 | 0 | 0 | 2 | 12 | 6 | 0 |
| **Thailand** | 44 | 56 | 4 | 52 | 14 | 5 | 20 | 10 | 3 | 1 | 0 | —4— | | | | 1 |
| **LATIN AMERICA** | | | | | | | | | | | | | | | | |
| **Colombia** | 44 | 56 | 16 | 40 | 8 | 0 | 16 | 11 | 1 | 2 | 3 | 1 | 7 | 6 | 1 | 1 |
| **Costa Rica** | 16 | 84 | 13 | 71 | 29 | 2 | 20 | 5 | 4 | 10 | 2 | 0 | 5 | 6 | 1 | 1 |
| **Dominican Republic** | 43 | 57 | 14 | 43 | 30 | 0 | 9[e] | 4 | [e] | 2 | —3— | | 6 | 2 | NA | 0 |
| **Mexico** | 52 | 48 | 11 | 37 | 7 | 1 | 15 | 9 | 2 | 1 | 2 | 0 | 6 | 5 | NA | 0 |
| **Panama** | 26 | 74 | 10 | 64 | 41 | 1 | 16 | 4 | 1 | 1 | 2 | 1 | 4 | 3 | 2 | 0 |
| **Peru[f]** | 54 | 46 | 29 | 17 | 6 | 0 | 5 | 2 | 1 | 2 | 1 | 5 | 5 | 15 | 4 | 1 |

NA = not available

[a]All currently married, nonpregnant, and fecund women, including those sterilized for contraceptive purposes
[b]Fiji — Definition of exposed excludes those in postpartum abstinence
[c]Indonesia — Injection included with female local methods
[d]Malaysia — Injection included with pill
[e]Dominican Republic — Injection included with pill
[f]Weighted sample

Source: First Country Reports. Table 5.2.3, except Bangladesh, Rep. of Korea, Thailand, Mexico, Peru 5.2.1; Costa Rica, 5.2.3A; Fiji, 113; Indonesia, 4.5.4; Pakistan, 5.2.3 revised.

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## Table 20. Percent Distribution of Exposed[a] Women According to Current Use of Specific Contraceptive Methods Among Women Who Desire Future Birth

| | No method used | Any method | Ineffective only | Effective | Pill | IUD | Injection | Condom | Female local | Douche | Withdrawal | Rhythm | Abstinence | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ASIA & PACIFIC** | | | | | | | | | | | | | | |
| **Bangladesh** | 98 | 2 | 1 | 1 | 0 | 0 | NA | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| **Fiji[b]** | 62 | 38 | 8 | 30 | 14 | 6 | NA | 10 | NA | NA | 4 | 4 | NA | 2 |
| **Indonesia** | 75 | 26 | 3 | 22 | 17 | 4 | [c] | 2 | 0[c] | —2— | | | | 1 |
| **Korea, Rep. of** | 84 | 16 | 4 | 12 | 5 | 3 | 0 | 4 | 0 | 0 | 1 | 3 | 0 | 0 |
| **Malaysia** | 66 | 34 | 9 | 25 | 22[d] | 1 | [d] | 3 | —0— | | 2 | 4 | 1 | 3 |
| **Nepal** | 100 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Pakistan** | 99 | 2 | 0 | 1 | 0 | 0 | NA | 1 | 0 | NA | 0 | 0 | 0 | 0 |
| **Sri Lanka** | 80 | 21 | 11 | 9 | 2 | 4 | 0 | 3 | 0 | 0 | 2 | 8 | 2 | 0 |
| **Thailand** | 72 | 28 | 4 | 24 | 16 | 6 | 2 | 1 | 0 | —3— | | | | 1 |
| **LATIN AMERICA** | | | | | | | | | | | | | | |
| **Colombia** | 55 | 45 | 13 | 33 | 18 | 10 | 1 | 2 | 3 | 1 | 4 | 6 | 1 | 1 |
| **Costa Rica** | 29 | 71 | 13 | 57 | 35 | 7 | 1 | 11 | 2 | 0 | 6 | 6 | 1 | 0 |
| **Dominican Republic** | 75 | 25 | 9 | 15 | 12[e] | 4 | [e] | 2 | —3— | | 3 | 1 | NA | 0 |
| **Mexico** | 66 | 34 | 8 | 26 | 15 | 7 | 2 | 1 | 2 | 0 | 3 | 4 | NA | 0 |
| **Panama** | 49 | 51 | 13 | 38 | 28 | 6 | 1 | 2 | 3 | 1 | 4 | 4 | 2 | 1 |
| **Peru[f]** | 64 | 36 | 24 | 13 | 7 | 2 | 2 | 1 | 1 | 4 | 4 | 15 | 1 | 0 |

NA = not available
[a]All currently married, nonpregnant, and fecund women, including those sterilized for contraceptive purposes
[b]Fiji — Base includes undecided as well as those who want more children. Definition of exposed excludes those in postpartum abstinence.
[c]Indonesia — Injection included with female local methods
[d]Malaysia — Injection included with pill
[e]Dominican Republic — Injection included with pill
[f]Weighted sample

Source: First Country Reports. Table 5.2.3, except Bangladesh, Rep. of Korea, Thailand, Mexico, Peru, 5.2.1; Costa Rica, 5.2.3A; Fiji, 113; Indonesia, 4.5.4; Pakistan, 5.2.3 revised.

women who want no more children is over 80 percent for those who know of no outlet for services compared with about 50 percent for those who know of an outlet nearby. The corresponding figures for Nepal are 95 and 51 percent, respectively (94).

The study concludes:

> To sum up, we have found the unmet need for contraception among exposed women to be higher in rural areas and among the least educated. The unmet need is substantially lower among those who know an outlet, and — except in Costa Rica — significantly lower among those who know a nearby as compared with a more distant outlet. In Colombia, Korea, and Malaysia the effect of distance may be attributed to urban-rural residence, but in Nepal, perceived accessibility has a significant net effect on the unmet need (94).

In other words, women who know of no outlet or estimate that the nearest outlet is more than one day's travel in Nepal or more than two hours' travel elsewhere are less likely to use family planning.

A further insight into family planning use is provided by looking at the practices of women who do desire more children but are using family planning to space births (see Table 20). In 11 of the 15 countries, more than 20 percent of the women who desire future births are using some form of family planning. In both Costa Rica and Panama, the figure is over 50 percent. It is lowest in Nepal, Pakistan, and Bangladesh. These percentages reflect the growing perception of family planning as a means to delay or space children, not merely to terminate all childbearing. Not surprisingly, the pill is the favorite method for spacing in all countries except Sri Lanka and Peru, where rhythm is most widely used, and Pakistan and Bangladesh, where the condom is. The IUD ranks second in Indonesia, Sri Lanka, Thailand, Colombia, the Dominican Republic, Mexico, and Panama.

Many factors, such as age, years since marriage, number of living children, rural or urban residence, educational level, and number of children desired, influence a woman's knowledge and use of modern family planning methods. These variables can be affected indirectly and over the long run by changes in the social and economic environment. In the short run, WFS data and analyses indicate, increasing knowledge and access to family planning services can contribute substantially to reducing the present gaps between knowledge and practice, between the number of women who want no more children and the number who use effective methods of family planning.

**Estimated Availability of WFS Data as of April 1979**

| Country | Edited tape produced by country | Country Report No. 1 published* | Documented standard recode tape available* |
|---|---|---|---|
| **AFRICA** | | | |
| **Cameroun** | Sept. 1979 | Nov. 1979 | Dec. 1979 |
| **Ghana** | Dec. 1979 | April 1980 | 1980 |
| **Kenya** | May 1979 | Sept. 1979 | Dec. 1979 |
| **Lesotho** | July 1979 | Dec. 1979 | Dec. 1979 |
| **Senegal** | Sept. 1979 | March 1980 | Dec. 1979 |
| **Sudan (north)** | Nov. 1979 | June 1980 | 1980 |
| **Tunisia** | Aug. 1979 | Nov. 1979 | 1980 |
| **ASIA & PACIFIC** | | | |
| **Bangladesh** | Feb. 1977 | Mar. 1979 | July 1979 |
| **Fiji** | July 1975 | Dec. 1976 | Dec. 1979 |
| **Indonesia** | Oct. 1977 | Jan. 1979 | July 1979 |
| **Iran** | 1979 | 1979 | 1979 |
| **Korea** | Feb. 1977 | Feb. 1978 | Oct. 1979 |
| **Malaysia** | 1977 | May 1977 | Oct. 1979 |
| **Nepal** | Nov. 1976 | Aug. 1977 | Oct. 1979 |
| **Pakistan** | March 1976 | Oct. 1976 | July 1979 |
| **Philippines** | April 1979 | Sept. 1979 | Sept. 1979 |
| **Sri Lanka** | June 1977 | June 1978 | Nov. 1978 |
| **Thailand** | June 1976 | 1977 | Dec. 1978 |
| **CARIBBEAN** | | | |
| **Guyana** | June 1978 | June 1979 | July 1979 |
| **Haiti** | May 1979 | Sept. 1979 | Sept. 1979 |
| **Jamaica** | June 1978 | Aug. 1979 | July 1979 |
| **Trinidad & Tobago** | Aug. 1979 | Dec. 1979 | Dec. 1979 |
| **LATIN AMERICA** | | | |
| **Colombia** | March 1977 | April 1978 | Nov. 1978 |
| **Costa Rica** | April 1977 | Oct. 1978 | July 1979 |
| **Dominican Republic** | 1976 | Nov. 1976 | Dec. 1979 |
| **Mexico** | July 1978 | March 1979 | Sept. 1979 |
| **Panama** | 1977 | March 1978 | Oct. 1978 |
| **Paraguay** | Nov. 1979 | April 1980 | 1980 |
| **Peru** | June 1978 | May 1979 | July 1979 |
| **Venezuela** | May 1979 | June 1979 | Sept. 1979 |
| **MIDDLE EAST** | | | |
| **Egypt** | June 1980 | Dec. 1980 | 1980 |
| **Jordan** | 1977 | July 1979 | July 1979 |
| **Syria** | Oct. 1979 | June 1980 | 1980 |
| **Turkey** | Sept. 1979 | Feb. 1980 | 1980 |
| **Yemen A.R.** | Aug. 1980 | Feb. 1981 | 1981 |

*Dates after April 1979 are estimated dates of availability and are subject to change. Country approval, obtained through WFS, is required for the use of all tapes.

**Table 2. Current and Future Participation of Developing Countries in the World Fertility Survey Program**

| Country (Population in millions*) | National Director/ Survey Director (SD)/ National Executive Agency(ies) | Languages used in Questionnaire | Modules | Sample size (Individual interview) | Date of Survey design visit/ Commencement of field work | Status of survey |
|---|---|---|---|---|---|---|
| **AFRICA** | | | | | | |
| **Benin** (3.4) | — | — | — | — | — | Official interest expressed |
| **Cameroun** (8.0) | N. Ngae<br>A. Nkoungourou (SD)<br>Directorate of Statistics | English<br>French<br>Pidgin A & B<br>Fulfulde<br>Ewondo<br>Bassa<br>Duala<br>Gomala<br>Bamun<br>Matakan<br>Medumba<br>Koka<br>Dschang | Community-level, Factors Other** | 12,000 | June 1976 (preliminary)/January 1978 | Editing and coding in progress |

*Population data from 1978 World Population Data Sheet of the Population Reference Bureau
**Other = Factors Other than Contraception Affecting Fertility

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**Table 2 (Continued)**

| | | | | | | |
|---|---|---|---|---|---|---|
| **Ghana** (10.9) | S.K. Kwafo<br>J.Y. Owusu (SD)<br>Central Bureau of Statistics | English<br>Asante-Twi<br>Dagbani<br>Dangbe<br>Ewe<br>Fante<br>Ga<br>Kasem<br>Hausa<br>Nzema<br>Akwapim-Twi | Abortion (in part), Factors Other, Family Planning (in part) | 7,500 | August 1977/<br>February 1979 | Field work in progress |
| **Ivory Coast** (7.2) | J. Amissah<br>G. Delaine (SD)<br>La Direction de la Statistique | — | Community-level, Factors Other | 6,000 | January 1979/<br>December 1979 | Preparatory stage |
| **Kenya** (14.8) | P. Singh<br>Central Bureau of Statistics | (9) | Factors Other, Family Planning (in part) | 10,000 | August 1975/<br>August 1977 | Tabulation in progress |
| **Lesotho** (1.3) | A.M. Monyake<br>A.M. Mpiti (SD)<br>Bureau of Statistics | Sesotho | Community-level, Factors Other, General Mortality, questions on availability of contraception | 5,000 | January 1976/<br>August 1977 | Machine editing and recoding in progress |
| **Mauritania** (1.3) | A.I. Sy<br>O. Cheikh (SD)<br>Bureau Centrale du Recensement, Ministère du Plan | — | — | — | — | Project submitted for funding |
| **Morocco** (18.9) | A. Alaoui | Arabic | Family Planning, Fertility Regulation, General Mortality | 7,000 | September 1978/<br>— | Preparatory stage |
| **Senegal** (5.4) | L. Diop<br>I.L. Diop (SD)<br>Bureau National du Recensement, Direction de la Statistique | Wolof<br>Pular<br>Mandinka<br>Serer | Community-level, Factors Other, General Mortality | 5,000 | June 1977/<br>June 1978 | Editing and coding in progress |
| **Sudan** (17.1) (north) | O.A. El-Tay<br>A. Modawi (SD)<br>Department of Statistics, Ministry of Finance, Planning and National Economy | Arabic<br>Bejawi | Abortion, Community-level, Factors Other | 12,000 | June 1977/<br>December 1978 | Office editing in progress |
| **Tunisia** (6.0) | M. B'chir<br>M. Ayad (SD)<br>M. Baraket (SD)<br>Office National du Planning familial et de la Population | Arabic | Abortion, Factors Other, Family Planning (in part) | 5,000 | May 1977/<br>May 1978 | Machine editing and recoding in progress |
| **ASIA & PACIFIC** | | | | | | |
| **Afghanistan** (17.8) | — | — | — | — | — | Definite interest expressed |
| **Bangladesh** (85) | M. Sattar<br>Ministry of Health, Population Control and Family Planning | Bengali<br>English | Abortion, Community-level, Factors Other, Fertility Regulation | 6,394 | March 1975/<br>December 1975 | Country Report No. 1 published 1979 |
| **Burma** (32.2) | U Soe Myint<br>U Thein Han (SD)<br>Department of Immigration and Manpower Services & Ministry of Home and Religious Affairs | Burmese | None | 8,000 | September 1977/<br>postponed | Survey suspended |
| **Fiji** (0.6) | R.L. Lodhia<br>Bureau of Statistics | Fijian<br>Hindi<br>English | Some module-type questions included | 4,928 | July 1973/<br>February 1974 | Survey completed. Country Report No. 1 published 1976 |
| **Hong Kong** (4.5) (associate status) | Census and Statistics Department | — | — | — | —/1976 | Country Report No. 1 published 1979 |
| **India** (634.7) | — | — | — | — | —/— | Survey to be conducted in 7 states using WFS methodology and software |

**Table 2 (Continued)**

| | | | | | | |
|---|---|---|---|---|---|---|
| **Indonesia** (140.2) | S. Suharto<br>B. Sungkono (SD)<br>Central Bureau of Statistics | Bahasa<br>Sundanese<br>Javanese<br>Maduranese<br>Balinese | Abortion, Family Planning, Fertility Regulation | 10,000 | June 1975/<br>March 1976 | Country Report No. 1 published 1979. Further analysis planned. |
| **Iran** (35.5) | N. Maroufi<br>Iran Statistical Center | Persian | Fertility Regulation, Husbands' Questionnaire | 5,500 | July 1976/<br>May 1977 | Work on machine editing and recoding suspended. |
| **Korea, Rep. of** (37.1) | Jin Hyun Hwang<br>E.H. Choe (SD)<br>Bureau of Statistics & Korean Institute for Family Planning | Korean | Abortion, Community-level, Economic, Family Planning, Fertility Regulation, General Mortality | 5,264 | February 1974/<br>September 1974 | Country Report No. 1 published 1978. Further analysis in progress. |
| **Malaysia** (13.0) | Nur Laily Aziz<br>V.T. Palan (SD)<br>Department of Statistics & National Family Planning Board | Official: Malay<br>English<br>Unofficial:<br>Chinese<br>Tamil | Abortion, Community-level, Economic, Family Planning, Fertility Regulation | 6,316 | April 1974/<br>August 1974 | Country Report No. 1 published 1978. Further analysis in progress. |
| **Nepal** (13.4) | B.R. Pande<br>J. Tuladhar (SD)<br>Nepal Family Planning/ Maternal & Child Health Project in the Ministry of Health | Nepali<br>Bhajipur<br>Mathal | Abortion, Factors Other, Family Planning, Fertility Regulation | 6,000 | September 1975/<br>April 1976 | Country Report No. 1 published 1977. Further analysis in progress. |
| **Pakistan** (76.8) | K. Siddiqui<br>Training, Research & Evaluation Center of the Population Council of Pakistan | Urdu<br>Pushto<br>Punjabi<br>Sindhi<br>Baluchi | Abortion, Family Planning, Fertility Regulation | 4,949 | May 1974/<br>May 1975 | Country Report No. 1 published 1976. Further analysis in progress. |
| **Philippines** (46.3) | T. Mijares &<br>M. Concepcion (Co-Dirs.)<br>National Census and Statistics Organization | English<br>Tagalog<br>Cebuano<br>Ilocano<br>Hiligaynon<br>Bicol | Abortion, Factors Other, Family Planning, Fertility Regulation | 15,000 | September 1976/<br>February 1978 | Recoding and tabulation in progress. |
| **Sri Lanka** (14.2) | W.A.A.S. Peiris<br>D. Fernando (SD)<br>Ministry of Plan Implementation & Department of Census and Statistics | Sinhalese<br>Tamil<br>English | Abortion, Family Planning, Fertility Regulation | 6,566 | January 1975/<br>August 1975 | Country Report No. 1 published 1977. Further analysis in progress. |
| **Thailand** (45.1) | Anuri Wanglee<br>National Economic and Social Development Board, National Statistical Office & Institute of Population Studies | Thai | Community-level, Economic (in husbands' survey), Fertility Regulation | 3,778 (plus 3,500 husbands) | June 1974/<br>March 1975 | Country Report No. 1 published 1977. Further analysis in progress. |
| **CARIBBEAN** | | | | | | |
| **Guyana** (0.8) | P. Chase<br>Bureau of Statistics | English (Caribbean version) | None | 4,858 | October 1974/<br>May 1975 | Country Report No. 1 in press |
| **Haiti** (4.8) | J. Vilgrain<br>D. Moise (SD)<br>Institut Haitien de Statistics | Creole | Factors Other | 4,500 | March 1975/<br>July 1977 | Machine editing in progress |
| **Jamaica** (2.1) | C. McFarlane<br>Department of Statistics | English (Caribbean version) | Economic | 5,500 | October 1974/<br>November 1975 | Country Report No. 1 to be published 1979 |
| **Martinique & Guadeloupe** (0.6) (associate status) | Y. Charbit (Resident French Adviser)<br>Institut National d'Etudes Démographiques | French<br>Creole | None | Martinique: 1,400<br>Guadeloupe: 1,400 | —/<br>Martinique: January 1976<br>Guadeloupe: October 1975 | Country Report No. 1 being drafted |
| **Trinidad & Tobago** (1.1) | L. Pujadas<br>L. Hewitt (SD)<br>Central Statistical Office | English (Caribbean version) | Fertility Regulation | 5,500 | October 1974/<br>March 1977 | Machine editing and recoding in progress. Country Report No. 1 to be published 1979. |
| **LATIN AMERICA** | | | | | | |
| **Bolivia** (4.9) | — | — | — | — | — | Official interest has been expressed. |
| **Brazil** (115.4) | — | — | — | — | — | Country survey planned using WFS methodology and software |

**Table 2 (Continued)**

| | | | | | | |
|---|---|---|---|---|---|---|
| **Chile** (10.8) | D.S. Chaparro O. Tacla (SD) | Spanish | Abortion, Factors Other, Fertility Regulation | 5,500 | October 1976/ — | Project suspended |
| **Colombia** (25.8) | G. Lopez-Escobar Corporación Centro Regional de Poblacion | Spanish | Abortion, Family Planning, Fertility Regulation | 5,391 | May 1975/ May 1976 | Country Report No. 1 published 1978. Further analysis in progress. |
| **Costa Rica** (2.1) | R. Sanchez Bolaños V.R. de Ortega & E. Cordero (Co-Dirs.) Dirección General de Estadística y Censos | Spanish | Abortion, Family Planning, Fertility Regulation | 3,935 | September 1975/ July 1976 | Country Report No. 1 published 1978. Further analysis in progress. |
| **Dominican Republic** (5.1) | N. Ramirez (SD) Consejo Nacional de Poblacion y Familia | Spanish | Family Planning, Fertility Regulation, General Mortality (in part) | 3,200 | August 1974/ April 1975 | Country Report No. 1 published 1976. Further analysis in progress. |
| **Ecuador** (7.8) | G. Acosta Instituto Nacional de Estadística y Censos | Spanish Quichua | — | 8,000 | October 1977/ 1979 | Field work planned for July-September 1979. |
| **El Salvador** (4.4) | — | — | — | — | — | Indication of interest |
| **Guatemala** (6.6) | M.C. Orellana J. Antillon de Vasquez (SD) | Spanish About 4 main Indian languages to be selected | — | 5,000 | October 1978/ 1980 | Project submission awaited |
| **Mexico** (66.9) | C. Welty (SD) Dirección General de Estadística | Spanish | Abortion, Community-level, Family Planning, General Mortality (in part) | 7,250 | June 1975/ July 1976 | Country Report No. 1 published 1979. Further analysis planned. |
| **Panama** (1.8) | F. Mascarin (SD) Oficina de Estudios de Poblacion | Spanish | Abortion, Family Planning, Fertility Regulation | 3,702 | October 1974/ December 1975 | Country Report No. 1 published March 1978. Further analysis in progress. |
| **Paraguay** (2.9) | J. Diaz de Bedoya D. Vera (SD) Ministerio de Salud Public & Dirección Estadística | Spanish | Family Planning, Fertility Regulation | 5,280 | February 1978/ February 1979 | Office coding in progress |
| **Peru** (17.1) | W. Caballero V.G. Diaz (SD) Instituto Nacional de Estadística | Spanish Ansash Quechua Ayacucho Quechua Cuzco Quechua Aymara | Community-level, Economic, Factors Other, Fertility Regulation, General Mortality (in part) | 7,000 | August 1976/ July 1977 | Country Report No. 1 published 1979. Further analysis planned. |
| **Venezuela** (13.1) | J. Paez Celiz L.A. Escalona (SD) Dirección General de Estadística | Spanish | Family Planning, Fertility Regulation | 4,500 | June-July 1976/ March 1977 | Tabulations and drafting of Country Report No. 1 in progress |
| **MIDDLE EAST** | | | | | | |
| **Egypt** (39.6) | Gen. G. Askar M.H. El-Guindi (SD) Central Agency for Public Mobilization and Statistics | Arabic | Abortion, Community-level, Family Planning (in part), Fertility Regulation | 10,000 | February 1978/ September 1979 | Preparatory stage |
| **Jordan** (2.9) | S. El Asad F. El-Hiyari Department of Statistics | Arabic | Abortion, Community-level, Factors Other, Fertility Regulation, General Mortality | 3,868 | October 1975/ June 1976 | Country Report No. 1 to be published 1979 |
| **Syria** (8.1) | F. El-Baustani M.N. El-Hallak (SD) Central Bureau of Statistics & Center for Population Surveys and Research | Arabic | Abortion, Community-level, Factors Other, Fertility Regulation, General Mortality | 4,500 | February 1977/ June 1978 | Machine editing in progress |
| **Turkey** (42.2) | S. Uner Institute of Population Studies, Haceteppe University | Turkish | Abortion (in part), Economic (in part), Family Planning, Fertility Regulation (modified) | 6,000 | February, August 1976/ September 1978 | Editing and coding in progress |
| **Yemen A.R.** (5.8) | M.F. Aggag A.S. Saif (SD) Department of Statistics, Central Planning Organization | Arabic | Community-level, Factors Other, General Mortality | 5,000 | August, November 1977/April 1979 | Field work planned for September-December 1979. |

**Table 3. Current and Future Participation of Developed Countries in the World Fertility Survey Program**

| Country (Population in millions*) | Executive Agency | Sample Size | Status of survey |
|---|---|---|---|
| **Australia** (14.3) | — | 10,000 | Under consideration |
| **Belgium** (9.9) (Flemish part only) | Population and Family Study Center, Department of Public Health and the Family | 4,900 | Publication of synthetic report planned for end of 1979. Analysis in progress. Some papers published. |
| **Bulgaria** (8.8) | Scientific Research Institute of Statistics | 6,000 | Analysis in progress. Short report on marital fertility published September 1978. Final Report to be published 1979. |
| **Canada** (23.6) | Family Planning Division, Health and Welfare | Not defined | Canadian National Fertility Survey consortium has prepared a detailed project plan. Survey postponed. |
| **Czechoslovakia** (15.2) | Federal Statistical Office | 3,000 | Tabulation completed |
| **Denmark** (5.1) | Danish National Institute of Social Research | 6,000 | Analysis in progress. Publication expected 1979. |
| **Finland** (4.8) | Population Research Institute | 6,100 | Tabulation in progress, expected end of 1979 |
| **France** (53.4) | Institut National d'Etudes Démographiques & Institut National de la Statistique et des Etudes Economiques | 3,600 women 600 men | Data processing in progress |
| **Hungary** (10.7) | Hungarian Central Statistical Office | 4,800 | Report published 1979 |
| **Israel** (3.7) | The Hebrew University | 6,000 | Analysis in progress. Report No. 1 to be published 1979. |
| **Italy** (56.7) | Statistical Institute | 7,000 | Funding approved. Field work began 1979. |
| **Japan** (114.4) | Department of Statistics and Information, Ministry of Health and Welfare | 2,344 | Report available in Japanese, summary in English |
| **Netherlands** (13.9) (10 marriage cohorts only) | Netherlands Interuniversity Demographic Institute | 4,522 | Report published 1979. Further analysis in progress. |
| **New Zealand** (3.2) | Management Services and Research Unit, Department of Health | 2,081 | Pilot study report lodged with WFS Library, London |
| **Norway** (4.1) | Central Bureau of Statistics | 5,100 | Tabulation in progress |
| **Poland** (35.1) | Central Statistical Office | 10,000 | Tabulation near completion. Report to be published 1979. |
| **Portugal** (9.7) | Central Bureau of Statistics | 7,000 | Survey in progress. |
| **Rumania** (21.9) | Population Commission of Rumania | 10,000 | Data processing in progress. Report expected end of 1979. |
| **Spain** (36.8) | Instituto Nacional de Estadística | 6,500 | First Report published 1978. Further analysis in progress. |
| **Sweden** (8.3) | National Central Bureau of Statistics | 4-5,000 | Approval awaited |
| **Switzerland** (6.2) | University of Zurich | 1,800 | Project in preparation |
| **UK** (56.0) | Office of Population Censuses and Surveys | 6,589 | Report in preparation. Data to be published 1979. |
| **USA** (218.4) | National Center for Health Statistics | 10,000 | Analysis in progress. Report to be published 1979. |
| **Yugoslavia** (22.0) | Federal Institute of Statistics | 7,500 | Tabulation and analysis in progress. Report in progress. |

*Population data from 1978 World Population Data Sheet of the Population Reference Bureau

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